# Tablas de cargas

# LR 1600/2-W

074548

SLDB, SL2DB

I - - I ==> Viento 9.0 m/s

EPROM: 30.08.2011

# Dirigirse a:

**Dirección:** LIEBHERR-WERK EHINGEN GMBH

Postfach 1361

D-89582 Ehingen / Donau

Tel.(07391)502-0 Telex 71763-0 le d

Telefax (07391)502-399

# Identificación del producto

**Fabricante:** LIEBHERR-WERK EHINGEN GMBH

Departamento de producción:

**Tipo:** LR 1600/2

N' de la máquina: 074548

**EPROM:** 30.08.2011

# I. INDICACIONES PARA EL USO DE LAS TABLAS DE CARGAS



### **PELIGRO**

¡Peligro de accidentes!

Para el servicio de grúa, es decisivo seguir las instrucciones del manual de instrucciones para el uso.

▶ Observar las indicaciones y los datos del manual de instrucciones para el uso!

1.	Explic	cacione	9S	pág. I - 5		
2.	Servi	cio de l	la grúa "Grúa estabilizada"	pág. I - 5		
3.	Procedimiento pág. I - 5					
4.	Existe	e peligr	o de vuelco o peligro de sobrecarga en los			
	comp	onente	es portantes en los casos siguientes:	pág. I - 6		
5.	Utiliza	ación d	e la grúa (acumulador de carga)	pág. I - 7		
6.	Contr	olador	de cargas LICCON e interruptores de fin de carrera	pág. I - 8		
7.	Cabre	estante	es (Mecanismos de elevación)	pág. I - 9		
8.	Coloc	ación (	del cable de elevación	pág. I - 9		
9.	Motor	nes de	gancho y ganchos de carga	pág. I - 14		
	9.1	Gancl	ho de carga y motón de gancho para el servicio de			
		_	con 1 cabrestante de cable de elevación en el			
		servic	sio simple con cable de tipo 1 (D=28 mm)	pág. I - 15		
		9.1.1	Gancho de carga 16 E			
			(0 poleas / carga 16,0 t)	pág. I - 15		
		9.1.2	Motón de gancho 50 EM	,		
		0.4.0	(1 poleas / carga 50,0 t)	pag. I - 15		
		9.1.3	Motón de gancho 125 DM (3 poleas / carga 121,0 t)	pág I 16		
		914	Motón de gancho 200 DM	pag. 1 - 10		
		0.1.4	(5 poleas / carga 184,5 t)	pág. I - 16		
		9.1.5	Motón de gancho doble 400 - 200 DMZ	. 0		
			(5 poleas / carga 184,5 t)	pág. I - 17		
		9.1.6	Motón de gancho doble 600 - 300 DMZ			
			(9 poleas / carga 300 t)	-		
	9.2		n de gancho para el servicio de grúa con 2 cabrestantes	3		
			ble de elevación en el servicio paralelo con cable	náa l 10		
			o 1 (D=28 mm)	pag. 1 - 19		
		9.2.1	Motón de gancho doble 400 - 200 DMZ (2 x 5 poleas / carga 369 t)	nág I <sub>-</sub> 10		
		9.22	Motón de gancho doble 600 - 300 DMZ	pag. i 10		
		J. <b>L</b> .L	(2 x 9 poleas / carga 600 t)	pág. I - 20		
			,	. •		

- 21
- 22
- 22
- 23
06
- 26
- 26
- 27
- 28
- 28
- 29
- 30
- 30
21
- 31
- 32
- 32
22
- 33

12.H	Reducciones de cargas	pag. 1 - 34
	12.1 Reducción de carga con la polea de ramal simple montada	pág. I - 34
	12.2 Reducción de carga con las barras de	
	arriostramiento montadas	pág. I - 35
	12.3 Reducción de capacidad de carga al montar un juego	
	de rodillos adicional	
13.S	Sistema de pluma	pág. I - 37
	13.1 Descripción breve de los grupos constructivos del	
	sistema de pluma	
	13.1.1 Pluma principal	
	13.1.2 Accesorio fijo	
	13.1.3 Accesorio movible	
	13.1.4 Pluma Derrick	
	13.1.5 Lastre Derrick	pág. I - 37
	13.2 Combinación de los grupos constructivos para los	
	modos de servicio	
14.E	Explicaciones de símbolos	-
	Colocación del cable de elevación	
	Carga en toneladas	pág. I - 38
	Símbolo de modos de servicio	pág. I - 38
	Servicio de grúa sin accesorio	pág. I - 39
	Servicio de grúa con accesorio	pág. I - 40
	Modos de servicio para el montaje	pág. I - 44
	Símbolos del alcance	pág. I - 45
	Largo de pluma principal con mástil en celosía	pág. I - 46
	Código abreviado	pág. I - 46
	Colocación del cable de elevación	
	Angulo de pluma principal / Angulo relativo de pluma adicional	pág. I - 46
	Radio del lastre Derrick	
	Peso de lastre Derrick	pág. I - 47
	Radio lastre Derrick y peso de lastre Derrick	
	Lastre central	
	Contrapeso	
	Combinaciones de lastre	
	Radio de giro	
	Servicio de grúa "Grúa estabilizada"	
	Velocidad de viento autorizado	

15. Velocidad de giro autorizado e inclinación lateral pág. I - 5	50
15.1 Velocidad de giro máxima autorizada del chasis superior con la carga nominal enganchadapág. I - 5	50
15.2 Inclinación lateral máxima autorizada de la grúa al operar con las tablas de cargaspág. I - 5	50
16.Influencias del viento en el servicio de grúa pág. I - 5	51
16.1 Definición de la terminología pág. I - 5	51
16.2 Influencia del viento ejercida en Controlador de	
cargas LICCON	53
16.2.1 Viento ejercido por la parte posterior pág. I - 5	53
16.2.2 Viento ejercido por la parte de delante pág. I - 5	53
16.2.3 Viento por el lado lateralpág. I - 5	53
16.3 Velocidad de viento autorizado y cálculo de la superficie	
de ataque del viento de la carga pág. I - 5	54
16.3.1 Medida de la velocidad de viento máximo	
autorizado	55
16.3.2 Cálculo de la velocidad de viento máximo	
autorizado con fórmula pág. I - 5	55
16.3.3 Medida de la velocidad de viento máximo	_
autorizado con diagramas de escalas de viento pág. I - 5	
16.3.4 Diagramas de escala de vientopág. I - 5	59

## **II. TABLAS DE CARGAS**

## 1. Explicaciones

- 1.1 Los valores de cargas en las tablas de cargas se indican en toneladas [t].
- 1.2 El alcance es la distancia horizontal calculada desde el centro de gravedad de la carga al eje de giro del chasis superior, medida en el suelo. Esta indicación es valida bajo carga nominal, es decir incluyendo la flexión elástica de la pluma.
- 1.3 Está prohibido posiciones de pluma a otros valores que no estén indicados en las tablas.
- 1.4 También sin carga, la pluma sólo se debe mover a los campos determinados por valores de cargas, sino hay peligro de vuelco. En el servicio normal está operación está asegurada por el Controlador de cargas. Al conectarse en "Montaje" (mediante el pulsador de llave para el montaje) la pluma no deberá descender sobrepasando más allá de la zona de alcance.
- 1.5 Los pesos de los medios portantes, los medios elevadores de carga y los elementos de detención ya están considerados en el valor de la carga. O sea que para conocer tan sólo el peso de carga por levantar se deberá sustraer los pesos de los dispositivos mencionados anteriormente.
- 1.6 Con los modos de servicio con coche lastre o lastre de suspensión se debe determinar el peso lastre Derrick para la carga por elevarse con el planificador de aplicación LICCON.

## 2. Servicio de la grúa "Grúa estabilizada"

- 2.1 Los largueros de apoyo desplegables de la estabilización hidráulica se deben extender a la medida indicada en la tabla de cargas por utilizarse (uniformemente por ambos lados).
- 2.2 Las placas de apoyo y las placas de base deben estar montados tal como se describe en el manual de instrucciones para el uso de la grúa en los cilindros de apoyo.
- 2.3 Las dos viga de orugas deben desprenderse del suelo.
- 2.4 Por medio del terminal Bluetooth<sup>TM</sup> (BTT) se debe nivelar la grúa horizontalmente. Dicha posición horizontal de la grúa deberá controlarse de tiempo en tiempo durante el servicio de grúa y si es necesario, corregirla.

### 3. Procedimiento

Véase el manual de instrucciones para el uso de la grúa.

# 4. Existe peligro de vuelco o peligro de sobrecarga en los componentes portantes en los casos siguientes:

- 4.1 Si las cargas, largos de pluma y alcances indicados en las tablas de cargas se han excedido.
- 4.2 Si por un mando erróneo del movimiento de la grúa, la carga enganchada comienza a oscilar.
- 4.3 Si se efectúa una tracción en diagonal. Especialmente es peligroso la tracción transversalmente a la dirección de la pluma. ¡Está prohibido la tracción transversal!
- 4.4 Si no se mantiene bastante distancia de las fosas, sótanos y taludes.
- 4.5 Si en el estado de servicio "Grúa estabilizada":
- 4.5.1 La grúa no se ha apoyado correctamente en todos los 4 estabilizadores hidráulicos ni nivelado verticalmente.
- 4.5.2 Los largueros de apoyo desplegables no se han extendido a la medida indicada en la respectiva tabla de cargas.
- 4.5.3 Las placas de apoyo y las placas de base no están montadas tal como se describe en el manual de instrucciones para el uso de la grúa en los cilindros de apoyo.
- 4.5.4 Los 4 estabilizadores hidráulicos no se ha asegurado a la base respondiendo a las condiciones del terreno ni colocando en una gran área materiales estables.
- 4.6 Si en el estado de servicio "Grúa sobre la viga de orugas":
- 4.6.1 El suelo no está en condiciones de soportar con seguridad el peso máximo de servicio de la grúa y además el peso de la carga.
- 4.6.2 Si el suelo no es plano aunque está inclinado. Véase "15.2 Inclinación lateral máxima autorizada de la grúa al operar con las tablas de cargas" en la pág.50.

## 5. Utilización de la grúa (acumulador de carga)

Las grúas automotrices y las grúas sobre orugas de Liebherr están concebidas para el servicio de montaje (categoría de acumulador de carga = "ligera" = Q1 ó L1). Si las grúas se utilizan con el servicio de imán, con cuchara almeja o servicio de transbordo (categoría de acumulador de carga = "medio" o superior), se deben observar diferentes puntos. Véase el capítulo 8.01 "Control periódico de las grúas" en el manual de instrucciones para el uso de la grúa.



#### Nota

► En caso que la grúa esté sometida a una acumulación de carga más elevada del promedio, por ejemplo por operar con el servicio de imán, con cuchara almeja o servicio de transbordo, entonces se deberán acortar los intervalos de control respectivo.

### **AVISO**

¡Desgaste prematuro y fisuras en los componentes portantes!

Si la grúa no se utiliza en el servicio de montaje sino en el servicio de imán, con cuchara almeja o servicio de transbordo, entonces se debe contar con un desgaste prematuro en los componentes de transmisión y/o con fisuras en los componentes portantes de acero.

▶ Por eso le recomendamos reducir urgentemente las cargas de un promedio del 50% en relación a los valores indicados en la respectiva tabla de cargas.

### **AVISO**

¡Alto desgaste del cable y daños en el cable!

¡Para mantener el más mínimo desgaste de los cables de elevación con el servicio de imán, con cuchara almeja o servicio de transbordo, se recomienda utilizar un largo de cable especial!

Si no es el caso, se pueden enroscar las capas de cable que no se utilizan. ¡En caso de fuertes tracciones de cable, el cable puede tirarse en las capas de cable que no se utilizan y causar daños de cable!

▶ ¡Con el servicio de imán, cuchara almeja o servicio de transbordo, utilizar un largo de cable especial para que todo el largo de cable se desenrolle en la posición más inferior del motón de gancho (hasta quedar unas 3-5 vueltas restantes de cable)!

# 6. Controlador de cargas LICCON e interruptores de fin de carrera

El Controlador de cargas LICCON funcionando electrónicamente desconecta los movimientos de elevación, de basculamiento de la pluma al sobrepasar el momento de carga admisible. Es posible descargar efectuando un movimiento opuesto. Antes de toda utilización, se debe controlar el funcionamiento correcto del Controlador de cargas LICCON.

- 6.1 El Controlador de cargas LICCON se debe ajustar al estado de montaje actual de la grúa mediante las teclas de función o introduciendo el código abreviado de 4 cifras respectivo.
- 6.2 El Controlador de cargas LICCON es un dispositivo de seguridad y no se deberá usar como dispositivo de desconexión de funcionamiento. El gruísta deberá comprobar el peso de la carga antes de comenzar el trabajo con cargas. La existencia del Controlador de cargas LICCON no exime al gruísta de su deber de operar con cuidado.
- 6.3 En la unidad de mando y de visualización del Controlador de cargas LICCON, se indican entre otros el alcance, largo de pluma, altura de los rodillos, carga y el estado de carga de la grúa. Esto permite tener un control permanente del campo de trabajo y de la utilización de la grúa.
- 6.4 Los interruptores de fin de carrera colocados en las puntas de pluma (pluma en celosía, pluma auxiliar) deberán evitar que el motón de gancho se inserte dentro del cabezal de pluma. Antes de cada aplicación de grúa, se deberá verificar la capacidad de su funcionamiento.
- 6.5 Controlar que los transmisores de giro de los cabrestantes de cable permitan que queden 3 vueltas de seguridad en los tambores de cable. Acercándose a la última capa del cable, se debe controlar también visualmente que se quede 3 vueltas de cable. Habiendo sobregirado los mecanismos de elevación en el sentido de elevación, así como después de cambiar el cable de elevación, es preciso ajustar de nuevo el interruptor de fin de carrera correspondiente antes de ponerlo en servicio.
- 6.6 El gruísta debe cerciorarse del funcionamiento correcto del Controlador de cargas LICCON antes de cada trabajo. El fabricante de la grúa no asume ninguna responsabilidad en caso de daños o daños consecuentes ocurridos por no poner en funcionamiento o estar fuera de servicio el Controlador de cargas LICCON.

# 7. Cabrestantes (Mecanismos de elevación)

7.1 Tracciones máximas de cable de los cabrestantes

Cable de elevación	Tracción máxima	Utilización
Tipo 1 (D=28 mm)	180 KN (18,1 t)	Cabrestante 1 Cabrestante 2
Tipo 2 (D=25 mm)	125 KN (12,6 t)	Cabrestante 6
Tipo 3 (D=28 mm)	160 KN (16,1 t)	Cabrestante 6

Estas tracciones no deberán sobrepasarse en ningún caso. Seleccionar respectivamente el número inferior de ramal de cable de elevación (colocación de cable) según el peso de la carga que se va a cargar (véase la tabla "Colocación de cable de elevación" en el capítulo II).

7.2 ¡Para evitar que el cable se enrosque, una persona deberá controlar el recorrido del cable en los cabrestantes al montar los equipos adicionales (por ej. polea de ramal simple)!

### 8. Colocación del cable de elevación

- 8.1 El cable de elevación se debe colocar entre cabezal de la pluma y el motón de gancho, lo cual depende de la tracción máx. del cable del mecanismo de elevación y del peso de la carga por elevar.
- 8.2 En caso de varios ramales de cable de elevación, el rendimiento del motón de gancho se reduce por la fricción de los rodillos y flexión del cable. Por ello, con una tracción de cable de por ej. de 180 KN para 10 ramales se pueden tirar sólo 1681 KN (169 t) en vez de 1800 KN (181 t).
- 8.3 Las cargas máx. a llevar según el número de ramales del cable de elevación se pueden ver en la tabla "Colocación del cable de elevación" en el capítulo II de este cuaderno.
- 8.3.1 Servicio de grúa con 1 cabrestante de cable de elevación en el servicio simple.

Ejemplo: Cálculo de la colocación de cable requerida para elevar una carga de 280 t.

El número de ramal que se requiere con 1 cabrestante de cable de elevación según la tabla "Colocación del cable de elevación" del cap. Il es para el diámetro de cable de 28 mm (tipo 1) de:

18 ramales (287,0 t)

8.3.2 Servicio de grúa con 2 cabrestantes de cable de elevación en el servicio paralelo.

En el servicio de grúa con 2 cabrestantes de cable de elevación del servicio paralelo, el número de ramales de cable que se requiere se calcula según 3 procedimientos.

Procedimiento 1: La carga se divide entre 2 ya que se tomará la misma cantidad de carga del cabrestante de cable de elevación 1 y del cabrestante de cable de elevación 2.

Procedimiento 2: El número de ramales que se requiere para 1 cabrestante de cable de elevación se calcula.

Procedimiento 3: El número de ramal calculado para 1 cabrestante de cable de elevación se aplica a los dos cabrestantes de cable de elevación.

Ejemplo: Cálculo del número de ramal que se requiere para elevar una carga de 280 t con 2 cabrestantes de cable de elevación en el servicio paralelo.

Procedimiento 1: 280 t / 2 cabrestantes de cable de elevación = 140 t.

Procedimiento 2: El número de ramal que se requiere con 1 cabrestante de cable de elevación según la tabla "Colocación del cable de elevación" del cap. Il es para el diámetro de cable de 28 mm (tipo 1) de:

9 ramales (153,2 t)

Procedimiento 3: El número de ramales necesarios con 2 cabrestante de cable de elevación en el servicio paralelo es igualmente de:

2 x 9 ramales = 18 ramales (2 x 153,2 t = 306,4 t)



### Nota

- Antes de aplicar el número de ramales calculado en el servicio de grúa, se debe controlar si el número de ramal mínimo de cable de elevación y el peso mínimo de motón de gancho son necesarios. Véase "10. Ramales mínimos de cable de elevación y pesos mínimos de motones de gancho" en la pág.21.
- 8.4 El número de ramales del cable de elevación en la unidad de mando y visualización del Limitador de cargas debe corresponder al número de ramales del cable de elevación presente actualmente en la grúa.

8.5 La tracción de cable máxima para países con un factor de seguridad de cable 5 según ASME B30.5 (Canadá, USA y Taiwan)



#### Nota

En los países en donde se aplica la norma nacional ASME B30.5 (Canadá, USA, y Taiwán) se ha prescrito una seguridad de cable de grado 5 para los cables de elevación antigiratorios. Las cargas que resultan de estas tracciones en la tabla "Colocación del cable de elevación" en el capítulo II de este manual se han medido según la norma DIN EN 13000 con una seguridad de cable de grado 4,5.

En la norma DIN EN 13000, al contrario de la ASME B30.5 se toma en cuenta así mismo el rendimiento de la tracción de cable. Por ese motivo en los países en donde se aplica la norma nacional ASME B30.5 (Canadá, USA, y Taiwán) se debe utilizar con una colocación de cable de hasta 13 ramales las cargas que resultan de las tracciones de cable en las tablas a continuación. ¡A partir de 13 ramales, el grado de seguridad del cable de 4,5 según la norma DIN EN 13000 es más seguro que aquel del grado 5 según la ASME B30.5!

Al respetar lo indicado en el capítulo 5.3.2.1.1 (d) en las normas ASME B30.5 se pueden utilizar igualmente las tracciones de cable según la DIN EN 13000.

8.5.1 Cargas máximas dependiendo del número de ramales de cable utilizadoCable de elevación Tipo 1: D=28,0 mm

Número de ramal	Carga máxima (DIN EN 13000)	Carga máxima (ASME B30.5) (Canadá, USA, y Taiwán)
	[t]	[t]
1	18,1	16,5
2	35,9	33,0
3	53,4	49,5
4	70,7	66,1
5	87,7	82,6
6	104,5	99,1
7	121,0	115,6
8	137,2	132,1
9	153,2	148,6
10	169,0	165,1
11	184,5	181,7
12	199,9	198,2
13	214,9	214,7

# Cable de elevación Tipo 2: D=25,0 mm

Número de ramal	Carga máxima (DIN EN 13000)	Carga máxima (ASME B30.5) (Canadá, USA, y Taiwán)
	[t]	[t]
1	12,6	11,5
2	24,9	22,9
3	37,1	34,4
4	49,1	45,9
5	60,9	57,3
6	72,5	68,8
7	84,0	80,3
8	95,3	91,7
9	106,4	103,2
10	117,4	114,7
11	128,2	126,1
12	138,8	137,6
13	149,3	149,1

## Cable de elevación Tipo 3: D=28,0 mm

Número de ramal	Carga máxima (DIN EN 13000)	Carga máxima (ASME B30.5) (Canadá, USA, y Taiwán)
	[t]	[t]
1	16,1	14,7
2	31,9	29,4
3	47,5	44,0
4	62,8	58,7
5	78,0	73,4
6	92,8	88,1
7	107,5	102,8
8	122,0	117,4
9	136,2	132,1
10	150,2	146,8
11	164,0	161,5
12	177,6	176,1
13	191,0	190,8

### 9. Motones de gancho y ganchos de carga

En este capítulo, el gancho de carga y los motones de gancho para este tipo de grúa se indicarán con el número de ramal máximo autorizado y su peso propio.

Adicionalmente se puede calcular a partir de las tablas:

- 1.) El peso del motón de gancho requerido para un cierto número de ramal y un cierto largo total de pluma.
- 2.) El número de ramal máximo posible para un cierto peso del motón de gancho y un cierto largo total de pluma.
- 3.) El largo total de pluma máximo posible para un cierto número de ramal y un cierto peso del motón de gancho.

Los valores indicados en las tablas se han calculado como datos básicos específicos a la grúa. Por esta razón, los datos en la tabla deben concordar con aquellos datos de la grúa.

Los datos específicos a la grúa para el servicio de grúa con 1 cabrestante de cable de elevación en el servicio simple y el servicio de grúa con 2 cabrestantes de cable de elevación en el servicio paralelo se indicarán respectivamente antes de los motones de gancho previstos para ello.

#### **AVISO**

¡Existe peligro de daño para el cable debido al peso insuficiente del motón de gancho!

Si el peso del motón de gancho es insuficiente para tensar correctamente el cable de elevación, es posible que al descender o elevar el motón de gancho, hayan problemas en los cabrestantes si el cable se enrosca. ¡Por lo tanto, el cable puede dañarse!

Para evitar el problema de enrollo en los cabrestantes, se puede aumentar el peso del motón de gancho en caso necesario, con los pesos adicionales o los kits de modificación. ¡Observar al respecto que se deban desmontar nuevamente los pesos adicionales si debido al aumento del peso propio del motón de gancho, se ha sobrepasado los pesos del motón de gancho autorizados para el levantamiento y descenso del sistema de pluma!

# 9.1 Gancho de carga y motón de gancho para el servicio de grúa con 1 cabrestante de cable de elevación en el servicio simple con cable de tipo 1 (D=28 mm)

Datos específicos a la grúa		
Diámetro del cable:	28,0	[mm]
Peso de cable:	0,00394	[t/m]
Partes de la pluma:	6	[m]
Largo de pluma mín.:	24	[m]
Largo de pluma máx.:	192	[m]
Número de cabrestantes de cable de elevación:	1	
Largo de cable de elevación:	1050	[m]
Derrick hasta la inversión del cable de elevación:	31,0	[m]

### 9.1.1 Gancho de carga 16 E (0 poleas / carga 16,0 t)

N° de ramales	Largo to	ma máxim motón de		peso de
	1,1 t sin peso adicional			
1	192			

### 9.1.2 Motón de gancho 50 EM (1 poleas / carga 50,0 t)

N° de ramales				m] con el ¡	peso de	
	1,0 t sin peso adicional	2,0 t con 2 pesos adiciona- les	3,0 t con 4 pesos adiciona- les			
3	60	120	186			
2	90	186	192			
1	192	192	192			

## 9.1.3 Motón de gancho 125 DM (3 poleas / carga 121,0 t)

N° de ramales	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]						
	1,5 t sin peso adicional	2,5 t con 2 pesos adiciona- les	3,5 t con 4 pesos adiciona- les	4,5 t con 6 pesos adiciona- les	5,5 t con 8 pesos adiciona- les		
7	36	60	84	108	120		
6	42	72	102	132	138		
5	48	84	120	156	162		
4	66	114	156	192	192		
3	90	150	192	192	192		
2	138	192	192	192	192		
1	192	192	192	192	192		

## 9.1.4 Motón de gancho 200 DM (5 poleas / carga 184,5 t)

N° de ramales	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]					
	2,0 t sin peso adicional	3,0 t con 2 pesos adiciona- les	4,0 t con 4 pesos adiciona- les	5,0 t con 6 pesos adiciona- les	6,0 t con 8 pesos adiciona- les	7,0 t con 10 pesos adiciona- les
11	24	42	54	72	78	78
10	30	48	60	78	84	84
9	36	54	72	90	96	96
8	42	60	84	102	108	108
7	48	72	96	120	120	120
6	54	84	114	138	138	138
5	66	102	138	162	162	162
4	90	132	180	192	192	192
3	120	186	192	192	192	192
2	186	192	192	192	192	192
1	192	192	192	192	192	192

## 9.1.5 Motón de gancho doble 400 - 200 DMZ (5 poleas / carga 184,5 t)

N° de ramales	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]					
	5,0 t sin peso adicional	6,0 t con 2 pesos adiciona- les	7,0 t con 4 pesos adiciona- les			
11	72	78	78			
10	78	84	84			
9	90	96	96			
8	102	108	108			
7	120	120	120			
6	138	138	138			
5	162	162	162			
4	192	192	192			
3	192	192	192			
2	192	192	192			
1	192	192	192			

## 9.1.6 Motón de gancho doble 600 - 300 DMZ (9 poleas / carga 300 t)

N° de ramales	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]					
	8,5 t sin peso adicional					
19	48					
18	48					
17	54					
16	54					
15	60					
14	60					
13	66					
12	72					
11	78					
10	84					
9	96					
8	108					
7	120					
6	138					
5	162					
4	192					
3	192					
2	192					
1	192					

# 9.2 Motón de gancho para el servicio de grúa con 2 cabrestantes de cable de elevación en el servicio paralelo con cable de tipo 1 (D=28 mm)

Datos específicos a la grúa		
Diámetro del cable:	28,0	[mm]
Peso de cable:	0,00394	[t/m]
Partes de la pluma:	6	[m]
Largo de pluma mín.:	24	[m]
Largo de pluma máx.:	192	[m]
Número de cabrestantes de cable de elevación:	2	
Largo de cable de elevación:	1050	[m]
Derrick hasta la inversión del cable de elevación:	31,0	[m]

### 9.2.1 Motón de gancho doble 400 - 200 DMZ (2 x 5 poleas / carga 369 t)

N° de ramales	Largo to	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]				
	6,0 t sin peso adicional	7,0 t con 2 pesos adiciona- les	8,0 t con 4 pesos adiciona- les	9,0 t con 6 pesos adiciona- les	10,0 t con 8 pesos adiciona- les	11,0 t con 10 pesos adiciona- les
2 x 11	42	48	54	66	72	78
2 x 10	48	54	60	72	78	84
2 x 9	54	60	72	78	90	96
2 x 8	60	72	84	90	102	108
2 x 7	72	84	96	108	120	120
2 x 6	84	102	114	132	138	138

9.2.2 Motón de gancho doble 600 - 300 DMZ (2 x 9 poleas / carga 600 t)

N° de ramales	Largo to	Largo total de pluma máximo posible [m] con el peso de motón de gancho [t]				
	11,0 t sin peso adicional	12,0 t con 2 pesos adiciona- les	13,0 t con 4 pesos adiciona- les	14,0 t con 6 pesos adiciona- les	15,0 t con 8 pesos adiciona- les	16,0 t con 10 pesos adiciona- les
2 x 19	36	42	48	48	48	54 <sup>(a)</sup>
2 x 18	42	42	48	48	48	54 <sup>(a)</sup>
2 x 17	42	48	54	54	54	60 <sup>(a)</sup>
2 x 16	48	54	54	54	54	60 <sup>(a)</sup>
2 x 15	54	60	60	60	60	66 <sup>(a)</sup>
2 x 14	60	60	60	60	60	66 <sup>(a)</sup>
2 x 13	66	66	66	66	66	72 <sup>(a)</sup>
2 x 12	72	72	72	72	72	72
2 x 11	78	78	78	78	78	78
2 x 10	84	84	84	84	84	84
2 x 9	96	96	96	96	96	96
2 x 8	108	108	108	108	108	108
2 x 7	120	120	120	120	120	120
2 x 6	138	138	138	138	138	138

<sup>(</sup>a) = ¡En los valores marcados con un <sup>(a)</sup> (largo total de pluma), el motón de gancho no puede descenderse hasta llegar al suelo debido al largo del cable de elevación!

# Ramales mínimos de cable de elevación y pesos mínimos de motones de gancho

Para un servicio de grúa seguro, se requieren por diferentes razones un número de ramal mínimo de cable de elevación y pesos mínimos de motones de gancho.

Existen 4 diferentes criterios límites para calcular el número de ramal mínimo de cable de elevación. Cada criterio implica un número de ramal mínimo de cable de elevación.

Estos criterios límites son:

- Tabla de número de ramal del cable de elevación (n<sub>min [Tabla de ramales]</sub>)
- 2.) Motivos estáticos (n<sub>min [Estático]</sub>), (G<sub>min [Estático]</sub>)
- 3.) Peso seguro de carga (n<sub>min [peso de lastre]</sub>)
- 4.) Control del servicio paralelo en funcionamiento (n<sub>min [servicio paralelo]</sub>)
- Número de ramal mínimo de cable de elevación debido a la tracción de cable máxima autorizada (n<sub>min [Tabla de ramales]</sub>)

Es el número de ramal mínimo de cable de elevación que dependiendo de la tracción máxima de cable del mecanismo de elevación es necesario para elevar la carga. Véase la tabla "Colocación del cable de elevación" en el capítulo II de este cuaderno.

 Número de ramal mínimo de cable de elevación y pesos mínimos de motones de gancho por razones estáticas (n<sub>min [Estático]</sub>), (G<sub>min [Estático]</sub>)

Son el número de ramal mínimo de cable de elevación y los pesos mínimos de motones de gancho necesarios para ciertos modos de servicio y los cuales deben impedir que la grúa con la pluma en posiciones erectas se mueva hacia atrás incontrolamente y se vuelque. Véase "10.1 Número de ramal mínimo de cable de elevación y pesos mínimos de motones de gancho, que por motivos estáticos son necesarios para ciertos modos de servicio" en la pág.22.

3.) Número de ramal mínimo de cable de elevación para un peso seguro de carga del Controlador de cargas LICCON (n<sub>min [Peso carga]</sub>)

Es el número de ramal mínimo de cable de elevación necesario en general en todos los modos de servicio para el peso seguro de carga del Controlador de cargas LICCON. Véase "10.2 Número de ramales mínimo de cable de elevación requerido para un peso seguro de carga del Controlador de cargas LICCON" en la pág.26.

4.) Número de ramal mínimo de cable de elevación para un control del servicio paralelo en funcionamiento (n<sub>min [servicio paralelo]</sub>)

Es el número de ramal mínimo de cable de elevación que permite evitar que el motón de gancho en el servicio paralelo se encuentre en una posición inclinada no autorizada . Véase "10.3 Número requerido de ramal mínimo de cable de elevación con el servicio paralelo" en la pág.29.

Antes del servicio de grúa, se deben calcular los números de ramales mínimos de cable de elevación según todos los 4 criterios límites. ¡El mayor número de ramal mínimo de cable de elevación calculado es el número determinante y debe utilizarse para elevar la carga!

- 10.1 Número de ramal mínimo de cable de elevación y pesos mínimos de motones de gancho, que por motivos estáticos son necesarios para ciertos modos de servicio
- 10.1.1 Número de ramal mínimo de cable de elevación con el servicio SLF; SL3F

TAB 18100047



### **ADVERTENCIA**

¡Peligro de vuelco!

Si el número de ramal mínimo de cable de elevación y el peso mínimo de motón de gancho no se respeta, la pluma al estar en la posición erecta puede moverse hacia atrás incontrolamente. ¡La grúa puede volcarse!

- Los pesos mínimos de motón de gancho y los números de ramal mínimo de cable de elevación indicados en la tabla deberán respetarse obligatoriamente en relación al ángulo de pluma principal.
- ► El motón de gancho puede bajarse sólo por debajo del campo de ángulo dado, es decir a posiciones planas por debajo de este campo.

En el servicio con las combinaciones de pluma según (1), el motón de gancho con el peso mínimo (2) y con el número de ramal mínimo de cable de elevación (3) debe actuar en el campo de ángulo de pluma principal (4).

(1) Pluma		(2) Peso mínimo del motón de	(3) Número de ramales	(4) Angulo de pluma principal	
SL [m]	F [m]	gancho [t]	mínimo del cable de ele- vación	desde [°]	hasta [°]
	F-12 / 11°	2,5	7	75	87
SL-54	F-12 / 11°	3,0	6	75	87
-	F-12 / 11°	3,5	5	75	87
SL3-108	F-12 / 11°	4,0	4	75	87
	F-12 / 16°	1,5	3	75	87

10.1.2 Número de ramal mínimo de cable de elevación con el servicio SW; SDW; SDWV

TAB 18100027



### **ADVERTENCIA**

¡Peligro de vuelco!

Si el número de ramal mínimo de cable de elevación y el peso mínimo de motón de gancho no se respeta, la pluma al estar en la posición erecta puede moverse hacia atrás incontrolamente. ¡La grúa puede volcarse!

Los pesos mínimos de motón de gancho y los números de ramal mínimo de cable de elevación indicados en la tabla deberán respetarse obligatoriamente en relación al ángulo de pluma principal.



### **ADVERTENCIA**

¡Peligro de vuelco!

Si la polea de ramal simple está montada en la punta en celosía basculable W-12 y el cable de elevación de la polea de ramal simple no tiene al menos 2 ramales colocados, entonces la pluma puede moverse incontroladamente hacia atrás cuando llegue la pluma a la posición vertical. ¡La grúa puede volcarse!

► Con la punta en celosía basculable W-12, y con la polea de ramal simple montada, se debe colocar el cable de elevación en la polea de ramal simple con al menos 2 ramales.



#### Nota

- Como ángulo de pluma principal se indica la inclinación de la pluma principal en relación a la horizontal.
- Los valores indicados en la tabla son también válidos de manera general para el servicio con la polea de ramal simple.
- Los números de ramal mínimo de cable de elevación son válidos para el servicio con 1 cabrestante de cable de elevación y para el servicio con 2 cabrestantes de cable de elevación.

Ejemplo para 6 ramales mínimo de cable de elevación:

1 cabrestante de cable de elevación: 1 x 6 ramales 2 cabrestantes de cable de elevación: 2 x 3 ramales En el servicio con las combinaciones de pluma según (1) debe actuar el motón de gancho con el peso mínimo (3) y con el ramal mínimo (2) de cable de elevación en el respectivo campo de ángulo de pluma principal.

	l) ma	(2) Número de ramales mínimo del cable de eleva-	Peso mínimo gan	3) del motón de cho t]
S [m]	W [m]	ción	Angulo de pluma princi- pal > 70°	Angulo de pluma princi- pal < 70°
S-36	W-12 <sup>(b)</sup>	8	3,0	-
5-30	W-18 <sup>(b)</sup>	4	2,0	-
C 40	W-12 <sup>(b)</sup>	8	3,0	-
S-42	W-18 <sup>(b)</sup>	4	2,0	-
C 40	W-12 <sup>(b)</sup>	10	4,0	-
S-48	W-18 <sup>(b)</sup>	4	4,0	-
0.54	W-12 <sup>(b)</sup>	10	7,0	4,0
S-54	W-18 <sup>(b)</sup>	4	4,0	-
	W-12 <sup>(b)</sup>	12	8,0	6,0
S-60	W-18 <sup>(b)</sup>	4	5,0	-
	W-24	4	2,0	-
	W-12 <sup>(b)</sup>	14	9,0	7,0
S-66	W-18 <sup>(b)</sup>	6	6,0	-
0.00	W-24	4	3,5	-
	W-30	4	3,5	-
	W-12 <sup>(b)</sup>	16	11,0	9,0
S-72	W-18 <sup>(b)</sup>	6	7,0	4,0
0 72	W-24	4	5,0	-
	W-30	4	5,0	-
	W-12 <sup>(b)</sup>	14	13,0	10,0
	W-18 <sup>(b)</sup>	8	8,0	5,0
S-78	W-24	6	5,0	-
	W-30	6	5,0	-
	W-36	4	3,0	-

(1) Pluma		(2) Número de ramales mínimo del cable de eleva-	(3) Peso mínimo del motón de gancho [t]		
S [m]	W [m]	ción	Angulo de pluma princi- pal > 70°	Angulo de pluma princi- pal < 70°	
	W-12 <sup>(b)</sup>	12	16,0	12,0	
	W-18 <sup>(b)</sup>	10	10,0	6,0	
S-84	W-24	6	7,0	4,0	
	W-30	6	7,0	-	
	W-36	4	3,0	-	
	W-18 <sup>(b)</sup>	12	11,0	8,0	
	W-24	6	10,0	4,0	
S-90	W-30	6	9,0	-	
0-90	W-36	4	5,0	-	
	W-42	4	4,0	-	
	W-48	4	4,0	-	
	W-24	8	11,0	6,0	
	W-30	6	11,0	-	
S-96	W-36	4	7,0	-	
	W-42	4	4,0	-	
	W-48	4	4,0	-	
	W-24	6	15,0	6,0	
	W-30	6	13,0	5,0	
S-102	W-36	6	8,0	-	
0-102	W-42	4	5,0	-	
	W-48	4	4,0	-	
	W-54	4	4,0	-	

 $<sup>^{(</sup>b)}$  = Las puntas en celosía basculables W-12 y W-18 indicadas con una  $^{(b)}$  son válidas sólo para el servicio SDWV.

# 10.2 Número de ramales mínimo de cable de elevación requerido para un peso seguro de carga del Controlador de cargas LICCON

Con un número bajo de ramal de cable de elevación, especialmente en posiciones erectas de la pluma, la señal de la brida medidora de tracción tomada del arriostramiento para pesar la carga, es tan baja que el Controlador de cargas LICCON no puede pesar la carga con bastante exactitud. Los números de ramales mínimos de cable de elevación indicados en las tablas aseguran que la grúa especialmente en posiciones erectas de la pluma a más de 60° con relación a la horizontal, no se sobrecargue involuntariamente.



### **ADVERTENCIA**

¡Peligro si los componentes portantes de carga se sobrecargan!

¡Si el número de ramal mínimo de cable de elevación no se observa, el Controlador de cargas LICCON puede recibir un peso de carga demasiado bajo. ¡Si el Controlador de cargas LICCON, debido a la indicación de carga baja, desconecta muy tarde la operación, los componentes portadores de carga se sobrecargarán causando por lo tanto su ruptura y accidentes mortales!

- Los números de ramales mínimos de cable de elevación indicados en las siguientes tablas deben respetarse obligatoriamente.
- ► El número de ramal mínimo de cable de elevación que es decisivo, es aquel que está en la tabla para la pluma, que está enganchando la carga.

# 10.2.1 Número de ramales mínimos de cable de elevación en la pluma principal con los modos de servicio sin Derrick, carga en la pluma principal

Modo de servicio	Largo de pluma principal	Número de ramales mínimo del cable de elevación		
	[m]	Servicio simple	Servicio paralelo	
	24	7	2 x 8	
	30	7	2 x 8	
	36	6	2 x 6	
	42	5	2 x 6	
	48	5	2 x 6	
	54	5	2 x 6	
	60	4	2 x 6	
S	66	4	-	
	72	4	-	
	78	3	-	
	84	3	-	
	90	3	-	
	96	3	-	
	102	3	-	
	108	3	-	

10.2.2 Número de ramales mínimos de cable de elevación en la pluma principal con los modos de servicio con Derrick, carga en la pluma principal

Modo de servicio	Largo de pluma principal	Número de ramales mínimo del cable de elevación		
	[m]	Servicio simple	Servicio paralelo	
	36	13	2 x 14	
	42	14	2 x 14	
	48	12	2 x 12	
	54	10	2 x 10	
	60	8	2 x 10	
	66	7	2 x 8	
	72	6	2 x 8	
	78	6	2 x 6	
	84	5	2 x 6	
SD	90	5	2 x 6	
	96	4	2 x 6	
	102	4	-	
	108	4	-	
	114	4	-	
	120	3	-	
	126	3	-	
	132	3	-	
	138	3	-	
	144	3	-	

10.2.3 Número de ramales mínimos de cable de elevación en la punta en celosía basculable (WV), carga en la punta en celosía basculable (WV)

Modo de servicio	Largo de la punta	Número de ramales mínimo del cable de elevación		
	basculable [m]	Servicio simple	Servicio paralelo	
	12	5	2 x 6	
	18	5	2 x 6	
	24	4	2 x 6	
	30	4	-	
	36	3	-	
	42	3	-	
	48	3	-	
WV	54	2	-	
	60	2	-	
	66	2	-	
	72	2	-	
	78	2	-	
	84	2	-	
	90	2	-	
	96	3	-	

# 10.2.4 Número de ramales mínimos de cable de elevación en la punta en celosía basculable (W), carga en la punta en celosía basculable (W)

Modo de servicio	Largo de la punta	Número de ramales mínimo del cable de elevación	
	basculable [m]	Servicio simple	Servicio paralelo
W	24	5	2 x 6
	30	5	2 x 6
	36	4	2 x 6
	42	4	-
	48	3	-
	54	3	-
	60	3	-
	66	3	-
	72	3	-
	78	2	-
	84	2	-
	90	2	-
	96	2	-

# 10.3 Número requerido de ramal mínimo de cable de elevación con el servicio paralelo

Con un número de ramal mínimo de cable de elevación de 2 x 6 ramales, asegurarse que con el servicio paralelo del cabrestante 1 y cabrestante 2, el motón de gancho evite encontrarse en una posición desviada no autorizada y que se asegure el funcionamiento paralelo del cabrestante 1 y cabrestante 2.



### **ADVERTENCIA**

¡Peligro si los componentes portantes de carga se sobrecargan!

¡Si el número de ramal mínimo de cable de elevación no se observa, se pueden sobrecargar los componentes portadores de carga debido a la posición desviada del motón de gancho causando por lo tanto su ruptura y accidentes mortales!

► ¡Con el servicio paralelo del cabrestante 1 y cabrestante 2, al menos 2 x 6 ramales deben estar colocados!

# 11. Procedimiento para calcular el número de ramal del cable de elevación y el motón de gancho

Antes de elevar una carga, se debe calcular el número de ramal del cable de elevación y el motón de gancho que se requieren para esta operación. A continuación se representará por procedimiento como se debe calcular el número de ramal de cable de elevación y el motón de gancho con el servicio simple (servicio de grúa con 1 cabrestante de cable de elevación) y con el servicio paralelo (servicio de grúa con 2 cabrestantes de cable de elevación).

### 11.1 Procedimiento 1: Cálculo de la carga

Las cargas indicadas en las tablas de cargas comprenden los siguientes pesos:

- Peso de la carga por levantar
- Peso de los elementos elevadores de carga (eslingas) (motón de gancho y gancho de carga)
- Peso de los elementos de detención

Antes de calcular el número de ramal de cable de elevación se debe calcular la carga (Peso de la carga + Peso de los elementos elevadores de carga (eslingas) + Peso de los elementos de detención).

El peso de los elementos elevadores de carga (eslingas) se calcula como en el capítulo "Motón de gancho y gancho de carga".

- ▶ Peso del motón de gancho requerido para calcular la carga por elevarse.
- ▶ Calcular el peso de los elementos de detención.

#### Resultado:

- Peso de la carga

# 11.2 Procedimiento 2: Cálculo del número de ramal mínimo de cable de elevación en relación a la tracción de cable máximo autorizado (n<sub>min [Tabla de número de ramales]</sub>)

El número de ramales en relación a la tracción máxima de cable de los cabrestantes de cable de elevación se calculan a partir de la "Tabla de número de ramales" en el capítulo II de este cuaderno.

► Calcular el número de ramal del cable de elevación n<sub>min [tabla de ramales]</sub> de la carga en el servicio de grúa con 1 cabrestante de cable de elevación, en el servicio simple.

-0-

Calcular el número de ramal del cable de elevación  $n_{min}$  [Tabla de ramales] de la carga en el servicio de grúa con 2 cabrestantes de cable de elevación, en el servicio paralelo.

#### Resultado:

- Número de ramal requerido n<sub>min [Tabla de ramales]</sub>



#### Nota

En el servicio de grúa con 2 cabrestantes de cable de elevación del servicio paralelo, el número de ramales de cable que se requiere se calcula según 3 procedimientos.

- ▶ La carga se divide entre 2 ya que se tomará la misma cantidad de carga del cabrestante de cable de elevación 1 y del cabrestante de cable de elevación 2.
- El número de ramal requerido para 1 cabrestante de cable de elevación se calcula.
- ► El número de ramal calculado para 1 cabrestante de cable de elevación se aplica para los dos cabrestantes de cable de elevación.

# 11.3 Procedimiento 3: Cálculo del número de ramal mínimo de cable de elevación y del peso mínimo de motón de gancho por razones estáticas (n<sub>min [Estático]</sub>), (G<sub>min [Estático]</sub>)

El número de ramales y los pesos del motón de gancho requeridos por razones estáticas que se requieren para ciertos modos de servicio, se calculan como en el capítulo "Número de ramales mínimo de cable de elevación y pesos mínimos de motón de gancho, necesarios por razones estáticas en ciertos modos de servicio".

Calcular el número de ramales mínimo de cable de elevación n<sub>min [Estática]</sub> y el peso mínimo de motón de gancho G<sub>min [Estática]</sub>, que se requieren por razones estáticas en ciertos modos de servicio.

### Resultado:

- Número de ramal requerido n<sub>min [Estática]</sub>
- Motón de gancho requerido G<sub>min [Estático]</sub>

# 11.4 Procedimiento 4: Cálculo del número de ramal mínimo de cable de elevación para un peso seguro de la carga en el Controlador de cargas LICCON (n<sub>min [peso de carga]</sub>)

El número de ramales mínimo de cable de elevación requerido para un peso seguro de carga en el Controlador de cargas LICCON se calcula como en el capítulo "Número de ramales mínimo de cable de elevación requerido para un peso de carga seguro del Controlador de cargas LICCON".

Calcular el número de ramal mínimo de cable de elevación n<sub>min [peso de carga]</sub>, que se requiere para un peso seguro de carga en el Controlador de cargas LICCON.

### Resultado:

- Número de ramal requerido n<sub>min [peso de carga]</sub>

## 11.5 Procedimiento 5: Cálculo del número de ramal mínimo de cable de elevación para un control de servicio paralelo en funcionamiento (n<sub>min [servicio paralelo]</sub>)

El número de ramal de cable de elevación que se requiere para un control de servicio paralelo en funcionamiento y el cual se necesita sólo para el servicio paralelo del cabrestante 1 y cabrestante 2, se calculan en el capítulo "Número de ramal mínimo de cable de elevación en el servicio paralelo".

Calcular el número de ramal mínimo de cable de elevación n<sub>min [servicio paralelo]</sub>, que se requiere para un peso seguro de carga en el Controlador de cargas LICCON.

#### Resultado:

- Número de ramal requerido n<sub>min [servicio paralelo]</sub>

# 11.6 Procedimiento 6: Cálculo del número de ramal mínimo de cable de elevación (n<sub>min</sub>) y del peso mínimo de motón de gancho (G<sub>min</sub>), que deben utilizarse para elevar la carga

Después de calcular el número de ramal mínimo de cable de elevación y el peso mínimo de motón de gancho para los criterios límites (n<sub>min [tabla de ramales]</sub>, n<sub>min [Estático]</sub>, G<sub>min [Estático]</sub>, n<sub>min [Peso de carga]</sub>, n<sub>min [Servicio paralelo]</sub>) se debe calcular el número mayor de ramal mínimo de cable de elevación y el peso del motón de gancho.

Calcular el número mayor de ramal mínimo de cable de elevación n<sub>min</sub> a partir del número de ramal mínimo de cable de elevación calculado (n<sub>min</sub> [tabla de ramales], n<sub>min</sub> [Estático], n<sub>min</sub> [Peso de carga], n<sub>min</sub> [Servicio paralelo]) y el peso mínimo de motón de gancho G<sub>min</sub> para (G<sub>min</sub> [Estático]).

### Resultado:

 Número de ramal mínimo de cable de elevación n<sub>min</sub> y peso mínimo de motón de gancho G<sub>min</sub> que se requieren. Estos deben utilizarse para elevar la carga.

## 12. Reducciones de cargas

### 12.1 Reducción de carga con la polea de ramal simple montada

- 12.1.1 Las cargas indicadas en las tabla de cargas para el servicio de grúa en la pluma principal con mástil en celosía o en la punta en celosía son válidas si no está montada la polea de ramal simple.
- 12.1.2 Si la polea de ramal simple en los modos de servicio sin polea de ramal simple, se queda montada en la cabezal de la pluma, entonces la capacidad de carga es menor en estos modos de servicio por incluir lo siguiente:
  - El peso de la polea de ramal simple
  - El peso del cable de elevación que se encuentra colocado en la polea de ramal simple
  - El peso de los elementos elevadores de carga (eslingas) utilizados en la polea de ramal simple
  - El peso de los elementos elevadores de carga (eslingas) y de detención en el cabezal de pluma
- 12.1.3 Para el servicio de grúa en la polea de ramal simple con la carga máxima de 36 t no existe ninguna tabla de cargas adjunta. Son válidas las tablas de cargas de los modos de servicio con pluma principal y pluma adicional aunque deberán reducirse la capacidad de carga debido a lo siguiente:
  - El peso de la polea de ramal simple
  - El peso del cable de elevación que se encuentra colocado en la polea de ramal simple
  - El peso de los elementos elevadores de carga (eslingas) y de detención utilizados en la polea de ramal simple
  - El peso de los elementos elevadores de carga (eslingas) utilizados en el cabezal de pluma

## 12.2 Reducción de carga con las barras de arriostramiento montadas

- 12.2.1 Las cargas indicadas en las tabla de cargas son válidas sin considerar las barras de arriostramiento montadas.
- 12.2.2 Si las barras de arriostramiento están montadas, los valores de la capacidad de carga posibles están reducidos.

La reducción de carga depende del peso y del centro de gravedad de las barras de arriostramiento y del ángulo de pluma. Cuanto más grande sea el peso de las barras de arriostramiento, más cerca será el centro de gravedad de las barras de arriostramiento al cabezal de poleas y cuanto más inclinada esté la pluma principal hacia la posición horizontal, mayor será la reducción de carga.

12.2.3 La reducción de capacidad de carga se calcula simplemente tomando el largo de pluma y el peso métrico de las barras de arriostramiento:

Reducción de capacidad de carga = 0,5 x largo de pluma x peso métrico de las barras de arriostramiento

12.2.4 Ejemplo para el servicio de pluma principal con las barras de arriostramiento colocadas en el caballete WA II:

Largo de pluma: 90 m

Peso métrico de las barras de arriostramiento: 0,120 t/m

Reducción de capacidad de carga (aprox.):

0,5 x 90 m x 0,120 t/m 5,4 t

## 12.3 Reducción de capacidad de carga al montar un juego de rodillos adicional

12.3.1 Existen 2 juegos de rodillos cambiables que pueden montarse individualmente o juntos en la extensión cabezal SW. El cabezal de conexión W puede operar con uno de los dos juegos de rodillos.



#### Indicación

Para las configuraciones en donde se ha previsto sólo un juego de rodillos en la extensión cabezal SW, se reduce la capacidad de carga indicada en la tabla al montar otro juego de rodillos. La reducción de capacidad corresponde al peso de dicho juego de rodillos adicional.



## **ADVERTENCIA**

Peligro de vuelco o peligro de sobrecarga con los componentes portadores de carga

Si los dos juegos de rodillos están montados en la extensión cabezal SW a pesar que está previsto sólo 1 juego de rodillos, entonces la grúa puede volcarse con el levantamiento y descenso o los componentes portadores de carga pueden sobrecargarse. ¡Los componentes pueden romperse y causar accidentes mortales!

► El peso del motón de gancho autorizado tal como se indica en las tablas de levantamiento y descenso, debe reducirse equivalente al peso propio del juego de rodillos adicional.

## 12.3.2 Peso propio de los juegos de rodillos

Juegos de rodillos	Peso propio
320 t	1,5 t
300 t	1,4 t

## 12.3.3 Configuraciones de pluma de la tabla de cargas

Pluma Modo de servicio		Cabezal de pluma	
S sin pluma auxiliar	S, SD,	Extensión cabezal SW con juegos de rodillos 320 t + 300 t	
S con pluma auxiliar	SW, SDW, SDWV, SWF,	Cabezal de conexión W con juego de rodillos 300 t	
SL y SL2	SL, SLF, SLD, SL2D, SL2DF,	Extensión cabezal SW con juego de rodillos 320 t	
SL3 y SL4	SL3F, SL4DF,	Cabezal de conexión F	
W	SW, SDW, SDWV, SWF,	Extensión cabezal SW con juego de rodillos 320 t	
F	SLF, SL3F, SL2DF, SWF,	Extensión cabezal F	

## 13. Sistema de pluma

# 13.1 Descripción breve de los grupos constructivos del sistema de pluma

## 13.1.1 Pluma principal

SL = Pluma principal con mástil en celosía, versión mixta

SL2 = Pluma principal con mástil en celosía, versión mixta, variante 2

SL3 = Pluma principal con mástil en celosía, versión mixta, variante 3

SL4 = Pluma principal con mástil en celosía, versión mixta, variante 4

S = Pluma principal con mástil en celosía, versión pesada

## 13.1.2 Accesorio fijo

Punta fija en celosía

H = Pluma auxiliar (polea de ramal simple)



#### Nota

F

▶ Para las poleas de ramal simple con propios dispositivos para pesar, no existen tablas de cargas en anexo.

#### 13.1.3 Accesorio movible

W = Punta en celosía basculable, versión pesada

WV = Punta en celosía, versión pesada, a un ángulo fijo en relación a la pluma principal

## 13.1.4 Pluma Derrick

D = Pluma Derrick (contrapluma)

## 13.1.5 Lastre Derrick

B = Lastre de suspensión

BW = Coche lastre

# 13.2 Combinación de los grupos constructivos para los modos de servicio

Los grupos constructivos del sistema de pluma pueden combinarse unos con otros respetando ciertos reglamentos de acuerdo a los modos de servicio. Véase "14. Explicaciones de símbolos" en la pág.38.



## 14. Explicaciones de símbolos

## Colocación del cable de elevación

Este símbolo aparece en la tabla "Colocación del cable de elevación" (1ra. tabla en capítulo II). Valor del número de ramales para el cable de elevación con el fin de alcanzar una capacidad de carga determinada.



## Carga en toneladas

Este símbolo aparece en la tabla "Colocación del cable de elevación" (1ra tabla en capítulo II). Valor de la carga máxima autorizada dependiendo de la colocación del cable de elevación.



## Símbolo de modos de servicio

El símbolo de los modo de servicio está dividido en dos partes.

Los datos representados en la mitad izquierda del símbolo, indican lo siguiente:

- Modo de pluma principal
- Angulo de pluma principal
- Largo de la pluma principal
- Largo del caballete SA

Los datos representados en la mitad derecha del símbolo, indican lo siguiente:

- Modo de pluma adicional
- Angulo de pluma adicional
- Largo de la pluma adicional



#### Nota

- ► ¡Los valores que se representan en la mitad izquierda y mitad derecha del símbolo de los modos de servicio de la tabla de cargas respectiva, deberán concordar exactamente con los ajustes seleccionados en el Controlador de cargas LICCON!
- Igualmente, en los modos de servicio sin accesorio, se debe ajustar la mitad derecha del símbolo de modos de servicio según lo indicado en la representación de la tabla de cargas del Controlador de cargas LICCON, para que se pueda seleccionar debidamente el modo de servicio.

## Servicio de grúa sin accesorio

En el servicio de grúa sin accesorio, sólo la mitad izquierda del símbolo está ocupada.

## Ejemplos:

S --

Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: S = Pluma principal con mástil en celosía, versión pesada
- Largo de la pluma principal por ej.: 48 m



Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SDB = Pluma principal con mástil en celosía, versión pesada, pluma

  Derrick y lastre de suspensión
- Largo de la pluma principal por ej.: 48 m

SL --60m Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SL = Pluma principal con mástil en celosía, versión mixta
- Largo de la pluma principal por ej.: 60 m

## Servicio de grúa con accesorio

En el servicio de grúa con accesorio, las dos mitades del símbolo están ocupados.



#### **PELIGRO**

Peligro de accidentes!

¡La pluma principal y la punta en celosía basculable no deberán bascularse al mismo tiempo, sino sólo uno después de otro!

## Ejemplos:



Lado izquierdo = Modo de servicio Pluma principal

Angulo de pluma principal por ej.: xx° = La pluma principal con mástil

en celosía se encuentra a un ángulo fijo cuyo valor en grados se encuentra en la respectiva tabla de cargas en la línea xx en relación a la

horizontal.

por ej.: S = Pluma principal con mástil en Modo de pluma principal

celosía, versión pesada

Largo de la pluma principal por ej.: 36 m

Lado derecho = Modo de servicio Pluma adicional

por ej.: W = Punta en celosía basculable, Modo de pluma adicional versión pesada

Largo de la pluma adicional por ej.: 24 m

xx° SDB W 48m 72m Lado izquierdo = Modo de servicio Pluma principal

Angulo de pluma principal por ej.: xx° = La pluma principal con mástil

en celosía se encuentra a un ángulo fijo cuyo valor en grados se

encuentra en la respectiva tabla de cargas en la línea xx en relación a la

horizontal.

Modo de pluma principal por ej.: SDB = Pluma principal con mástil en

celosía, versión pesada, pluma Derrick y lastre de suspensión

Largo de la pluma principal por ej.: 48 m

Lado derecho = Modo de servicio Pluma adicional

Modo de pluma adicional por ej.: W = Punta en celosía basculable,

versión pesada

Largo de la pluma adicional por ej.: 72 m



Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SDB = Pluma principal con mástil en

celosía, versión pesada, pluma Derrick y lastre de suspensión

Largo de la pluma principal por ej.: 84 m

Lado derecho = Modo de servicio Pluma adicional

Modo de pluma adicional por ej.: WV = Punta en celosía, versión pesada, a un ángulo fijo en relación a

la pluma principal

Angulo de pluma adicional por ej.:  $xx^{\circ}$  = La pluma adicional con mástil

en celosía se encuentra a un ángulo fijo cuyo valor en grados se encuentra en la respectiva tabla de cargas en la línea xx en relación a la

pluma principal con mástil en

celosía.

- Largo de la pluma adicional por ej.: 12 m



Lado izquierdo = Modo de servicio Pluma principal

- Angulo de pluma principal por ej.:  $xx^{\circ}$  = La pluma principal con mástil

en celosía se encuentra a un ángulo fijo cuyo valor en grados se encuentra en la respectiva tabla de cargas en la línea xx en relación a la

horizontal.

Modo de pluma principal por ej.: S = Pluma principal con mástil en

celosía, versión pesada

- Largo de la pluma principal por ej.: 42 m

Lado derecho = Modo de servicio Pluma adicional

- Modo de pluma adicional por ej.: W54m = F

por ej.: W54m = Punta en celosía basculable, versión pesada. Largo de la punta en celosía basculable

54 m.

por ej.: F36m 26° = Punta fija en celosía. Largo de la punta fija en celosía 36 m. Montada a un ángulo fijo de 26° con relación a la punta en

celosía basculable.



Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SL = Pluma principal con mástil en celosía, versión mixta

- Largo de la pluma principal por ej.: 72 m

Lado derecho = Modo de servicio Pluma adicional

- Modo de pluma adicional por ej.: F = Punta fija en celosía

- Ángulo de pluma adicional por ej.:  $10^{\circ}$  = Montado a un ángulo de  $10^{\circ}$  en

relación a la pluma principal con

mástil en celosía.

- Largo de pluma adicional por ej.: 36 m



Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SL3 = Pluma principal con mástil en celosía, versión mixta, variante 3

- Largo de la pluma principal por ej.: 93 m

Lado derecho = Modo de servicio Pluma adicional

- Modo de pluma adicional por ej.: F = Punta fija en celosía

- Ángulo de pluma adicional por ej.: 18° = Montado a un ángulo de 18° en relación a la pluma principal con

mástil en celosía.

- Largo de pluma adicional por ej.: 24 m

SL2DB F 28° 108m 30m Lado izquierdo = Modo de servicio Pluma principal

- Modo de pluma principal por ej.: SL2DB = Pluma principal con mástil en celosía, versión mixta, variante 2,

pluma Derrick y lastre de suspensión

- Largo de la pluma principal por ej.: 108 m

Lado derecho = Modo de servicio Pluma adicional

- Modo de pluma adicional por ej.: F = Punta fija en celosía

- Ángulo de pluma adicional por ej.: 28° = Montado a un ángulo de 28° en

relación a la pluma principal con

mástil en celosía.

- Largo de pluma adicional por ej.: 30 m

SL4DBW F 32° 78m 18m Lado izquierdo = Modo de servicio Pluma principal

Modo de pluma principal por ej.: SL4DBW = Pluma principal con

mástil en celosía, versión mixta, variante 4, pluma Derrick y coche

lastre

- Largo de la pluma principal por ej.: 78 m

Lado derecho = Modo de servicio Pluma adicional

Modo de pluma adicional por ej.: F = Punta fija en celosía

- Ángulo de pluma adicional por ej.: 32° = Montado a un ángulo de 32° en

relación a la pluma principal con

mástil en celosía.

- Largo de pluma adicional por ej.: 18 m

## Modos de servicio para el montaje



## **PELIGRO**

¡Peligro de accidentes!

► El modo de servicio para el montaje SA deberá utilizarse exclusivamente para el montaje de los componentes de la grúa. ¡Las instrucciones para el montaje en el manual de instrucciones para el uso deben observarse estrictamente!

## Ejemplos:



Lado izquierdo = Modo de servicio Pluma principal

- Angulo de pluma principal por ej.: SA = Servicio de montaje con el caballete SA

- Largo del caballete SA por ej.: 10,5 m

## Símbolos del alcance

El alcance (radio de trabajo) es la distancia horizontal medida en el suelo entre el centro de gravedad de la carga enganchada y el eje giratorio del chasis superior.



Símbolo de alcance para modos de servicio con pluma principal.



Símbolo de alcance para los modos de servicio Pluma principal con pluma Derrick y lastre Derrick.



Símbolo de alcance para los modos de servicio Pluma adicional con accesorio fijo.



Símbolo de alcance para los modos de servicio Pluma adicional con accesorio fijo, pluma Derrick y lastre Derrick.



Símbolo de alcance para los modos de servicio Pluma adicional con accesorio móvil.



Símbolo de alcance para los modos de servicio Pluma adicional con accesorio móvil, pluma Derrick y lastre Derrick.



m > < t

## Largo de pluma principal con mástil en celosía

En la raya debajo de este símbolo se encuentran diferentes largos de pluma en forma de columnas. Las letras al lado del símbolo de pluma indican las unidades de medida de los diferentes valores indicados por ej.: "m> <t" significa que todos los valores de longitud están en metros [m], y las de peso en toneladas [t].

## Código abreviado

CODE > 0010 <

n \*

Código abreviado de 4 dígitos. Describe de forma abreviada el modo de servicio / estado de equipo ajustado. El código abreviado puede introducirse directamente en el Controlador de cargas LICCON para abrir la tabla de cargas respectiva.

## Colocación del cable de elevación

Aparece en las tablas de cargas en forma de línea debajo de los valores de carga. Indica el número de ramales del cable de elevación, necesario para elevar la carga máxima correspondiente a la columna de tabla respectiva en el servicio de grúa con 1 cabrestante de cable de elevación. Si un valor de carga de la columna sobrepasa la carga levantable con el número de ramal máximo posible en el servicio de grúa con 1 cabrestante de cable de elevación, entonces al lado del número de ramal, se inscribe una marca (!), indicando que para elevar dicha carga, es necesario un equipo especial.

El número de ramales requerido para el servicio paralelo del cabrestante de cable de elevación 1 y cabrestante de cable de elevación 2 debe calcularse a partir de la tabla de colocación de cable. Véase "8. Colocación del cable de elevación" en la pág.9.

## Angulo de pluma principal / Angulo relativo de pluma adicional

XX

Aparece sólo con los modos de servicio con punta en celosía basculable en forma de línea debajo del número de ramales.

En las columnas, se han indicado al lado los ángulos de pluma principal o los ángulos de pluma adicional que deberán ajustarse para poder elevar las cargas correspondientes a la columna de carga.



#### Nota

- ➤ Si se ha indicado xx en la mitad izquierda del símbolo de modos de servicio (modo de servicio de pluma principal), entonces se ha inscrito los ángulos de pluma principal en las columnas.
- ➤ Si se ha indicado xx en la mitad derecha del símbolo de modos de servicio (modo de servicio de pluma adicional), entonces se han inscrito en las columnas los ángulos relativos de pluma adicional en relación a la pluma principal.

## Radio del lastre Derrick

уу

Aparece sólo con los modos de servicio con lastre Derrick en forma de línea debajo del número de ramales. En las columnas están indicados sucesivamente los radios de lastre Derrick que deben ajustarse para poder elevar las cargas al respectivo valor indicado en la columna de carga.

## Peso de lastre Derrick

ZZ

Aparece sólo con los modos de servicio con lastre Derrick en forma de línea debajo del radio lastre Derrick. En las columnas se han inscrito al lado, los pesos de lastre Derrick que deberán consultarse para poder elevar las cargas de la columna de tablas respectivas.

## Radio lastre Derrick y peso de lastre Derrick

El símbolo aparece con los modos de servicio con lastre Derrick en vez del símbolo de campo de giro. El campo de giro autorizado del chasis superior es con estos modos de servicio de 360°.

Valores en el símbolo



- zz Peso de lastre Derrick que debe consultarse para poder elevar la carga de la respectiva columna de tabla.
- yy Radio de lastre Derrick que debe ajustarse para poder elevar la carga de la respectiva columna de tabla.



## Lastre central

En este símbolo, se indica el valor del lastre central expresado en toneladas [t] que debe encontrarse en el vehículo sobre orugas para poder llegar a los valores de la tabla presente.



## Contrapeso

En este símbolo, se indica el valor del contrapeso expresado en toneladas [t] que debe encontrarse en la plataforma giratoria para poder llegar a los valores de la tabla presente.



## Combinaciones de lastre

En este símbolo, se indican diferentes combinaciones de lastre. En la tabla indicada abajo se puede ver la composición de las combinaciones de lastre. Para obtener los valores de la tabla de cargas en cuestión, los contrapesos indicados y el lastre central de la respectiva combinación de lastre deben estar montados en la posición respectiva.

Combina- ción de las- tre	Contrapeso en la plataforma giratoria	Contrapeso en la prolongación de plataforma giratoria	Lastre central
var1	90 t	67,5 t	65 t
var2	90 t	67,5 t	45 t
var3	90 t	47,5 t	45 t
var4	90 t	27,5 t	45 t

## Radio de giro



Características de la zona de giro del conjunto superior de la grúa para la tabla de cargas portantes correspondiente:

360° = giro sin limitación alguna



## Servicio de grúa "Grúa estabilizada"

Valores de la base de apoyo (por ej. 17,5 m x 10,0 m = largo x ancho). Los estabilizadores hidráulicos de la grúa deben estar extendidos a la medida indicada en este símbolo, si se debe operar con la respectiva tabla de cargas.



## Velocidad de viento autorizado

Indicación de la velocidad del viento en [m/s] hasta la cual se permite el servicio de la grúa, según el largo de la pluma. Si la velocidad del viento sobrepasa el valor indicado, se debe ajustar el servicio de la grúa y, eventualmente retirar el equipo de la grúa.

## 15. Velocidad de giro autorizado e inclinación lateral

# 15.1 Velocidad de giro máxima autorizada del chasis superior con la carga nominal enganchada



## **ADVERTENCIA**

¡Peligro de accidentes!

¡Si la velocidad de giro máxima autorizada se sobrepasa, la grúa puede volcarse y los componentes llevando la carga pueden sobrecargarse!

▶ ¡La velocidad de giro autorizada no podrá sobrepasarse!

Modo de ser- vicio	Número de mecanismos giratorios	Velocidad de giro autorizado LICCON [%]	Velocidad de giro autorizado $\left[\frac{1}{\min}\right]$
Todos los modos de servicio	1	5	0,05
	2	5	0,05
	3	5	0,04

# 15.2 Inclinación lateral máxima autorizada de la grúa al operar con las tablas de cargas



## **ADVERTENCIA**

¡Peligro de vuelco!

¡Si se sobrepasa la inclinación lateral máxima autorizada, la grúa puede volcarse!

► ¡La inclinación lateral autorizada no podrá sobrepasarse!

Modo de servicio	Inclinación lateral máxima autorizada de la grúa al operar con las tablas de cargas.	
Sobre orugas	0,3°	
Sobre estabilizadores	0,0°	

## 16. Influencias del viento en el servicio de grúa

## 16.1 Definición de la terminología

Para una mejor comprensión, se indican a continuación los términos más importantes relativos a la influencia del viento en el servicio de grúa.



## Nota

- Acostúmbrese a esta terminología. Para determinar y calcular la velocidad de viento autorizado, se deben conocer la magnitud de las influencias!
- ▶ ¡Diríjase a la empresa Liebherr-Werk Ehingen GmbH, si necesita más informaciones sobre las influencias del viento durante el servicio de grúa!

		Denominación	Definición
A <sub>P</sub>	[m <sup>2</sup> ]	Superficie de pro- yección	Superficie determinante para el cálculo de la superficie expuesta al viento, vertical en relación al flujo de entrada.
c <sub>W</sub>		Coeficiente de resistencia al viento	Valor para el arrastre de un cuerpo en resistencia al viento.
A <sub>W</sub>	[m <sup>2</sup> ]	Superficie expuesta al viento	Superficie expuesta al viento = Superficie de proyección x Coefi- ciente de resistencia A <sub>W</sub> = A <sub>P</sub> x c <sub>W</sub>
m <sub>T</sub>	[t]	Carga	Valor individual tomado de la tabla de cargas.
m <sub>H</sub>	[t]	Carga de elevación	Peso por elevar (Masa) (incluye elementos de detención, motón de gancho y eventualmente parte del cable de elevación no considerado todavía en el cálculo). La carga de elevación podrá alcanzar como máximo aquel valor indicado como máximo en la tabla de cargas.
m <sub>N</sub>	[t]	Carga útil	Peso (Masa) del componente por elevar (sin elementos de detención ni motón de gancho).

		Denominación	Definición
v(z)	[m/s]	Velocidad de ráfa- gas de viento de 3 segundos	Valor promedio resentido en un espacio de 3 segundos a una altura z sobre el nivel del suelo.
v <sub>max</sub>	[m/s]	Velocidad de viento máximo autorizado	Velocidad de ráfagas de viento máximo autorizado de 3 segundos a una altura de elevación máxima.
V <sub>max_</sub> TAB	[m/s]	Velocidad de viento máximo autorizado (tabla de cargas)	Velocidad de ráfagas de viento máximo autorizado de 3 segundos a una altura de elevación máxima de acuerdo con la tabla de cargas para los valores de carga.
p	[N/m <sup>2</sup> ]	Presión dinámica	Carga de presión sometido en un cuerpo debido al flujo de entrada del viento. Presión dinámica = Densidad /2 x (velocidad ráfaga de viento de 3 segundos) <sup>2</sup> $p = \rho/2 \times (v(z))^2$ $(\rho = Densidad del aire = 1,25 \text{ kg/m}^3)$
F <sub>W</sub>	[n]	Cargas sometidas a viento	Influencia de fuerza ejercida en un cuerpo debido al flujo de entrada del viento. F <sub>W</sub> = A <sub>W</sub> x p

## 16.2 Influencia del viento ejercida en Controlador de cargas LICCON

Especialmente en los modos de servicio con sistemas largos de pluma y con la pluma en posición vertical, el sistema de la grúa puede estar sometido a carga o descarga adicional por la influencia del viento. Por consecuencia el valor de la carga visualizada está alterada. El Controlador de cargas LICCON se puede eventualmente desconectar mucho antes o mucho después.

## 16.2.1 Viento ejercido por la parte posterior

Si el viento viene por la parte posterior, el sistema de pluma estará sometido a carga adicional. La indicación del valor de carga será demasiada alta. La desconexión del Controlador de cargas LICCON ya se produce con una carga de elevación la cual es inferior a la carga máxima.

## 16.2.2 Viento ejercido por la parte de delante

Si el viento viene por la parte de delante, el sistema de pluma estará sometido a descarga adicional. La indicación del valor de carga será demasiada baja. La desconexión del Controlador de cargas LICCON se produce con una carga de elevación sólo cuando ésta es mayor que la carga máxima.



#### **PELIGRO**

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga!

Los vientos por la parte delantera no reducen la carga ejercida en el gancho, cable de elevación, poleas de cable ni cabrestante de elevación. ¡En caso de vientos por la parte delantera, se podría sobrecargar dicho grupo constructivo al elevar la carga hasta llegar a la desconexión del Controlador de cargas LICCON!

Si baja el viento por la parte delantera y si antes se había cargado hasta haberse desconectado el Controlador de cargas LICCON, toda la grúa podrá sobrecargarse.

► ¡El gruísta deberá conocer el peso de la carga de elevación y no podrá sobrepasar la carga máxima!

## 16.2.3 Viento por el lado lateral

Si el viento viene por la parte lateral, el sistema de pluma estará sometido a carga lateralmente. El indicador de carga es casi el mismo que con el servicio de grúa sin influencia del viento.



#### **PELIGRO**

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga!

¡Si con el servicio de grúa, la velocidad de viento es mayor que aquella máxima autorizada, entonces la grúa se sobrecargará involuntariamente con el viento lateral!

Antes de poner el servicio de grúa, conocer las velocidades de viento máximos autorizados y si es necesario efectuar un cálculo de la superficie de ataque del viento de la carga!

# 16.3 Velocidad de viento autorizado y cálculo de la superficie de ataque del viento de la carga



## **PELIGRO**

¡Peligro de vuelco y peligro de sobrecarga de los componentes portadores de carga!

- ► El gruísta antes de iniciar las operaciones, deberá informarse en el Instituto de Meteorología competente sobre las velocidades de viento previstas durante el tiempo de la operación. ¡Si se han pronosticado velocidades del viento inadmisibles, esta prohibido levantar la carga de elevación!
- ¡La velocidad de ráfagas de viento de 3 segundos v(z) a una altura de elevación máxima, no deberá sobrepasar en ningún momento la velocidad de viento máximo autorizado (v<sub>máx</sub>) ni la velocidad de viento máximo autorizado indicada según la tabla de cargas (v<sub>máx TAB</sub>)!



#### Nota

La velocidad de viento máximo autorizado (v<sub>máx</sub>) y la velocidad de viento máximo autorizado indicada según la tabla de cargas (v<sub>máx\_TAB</sub>) se refieren siempre a la velocidad de ráfagas de 3 segundos que alcanza en la altura máxima de elevación.

Los servicios de meteorología indican por lo general una velocidad de viento medida en un espacio de tiempo de 10 minutos (llamado promedio de 10 minutos) en vez de ráfagas resentidas durante 3 segundos. La velocidad de viento se relaciona normalmente al promedio de la velocidad de viento tal como lo es la escala de viento a la escala Beaufort, es decir una velocidad medida en un espacio de tiempo de 10 minutos a una altura de 10 m sobre el nivel del suelo o sobre el nivel del mar.

¡La velocidad de ráfagas de viento de 3 segundos determinante para el cálculo a una altura máxima de elevación es muy superior al promedio de velocidad de viento medida en un espacio de 10 minutos a una altura de 10 m sobre el nivel del suelo!

El servicio de grúa de manera general está autorizado hasta llegar a la velocidad de viento máximo autorizado (v<sub>máx\_TAB</sub>) indicada en la respectiva tabla de cargas para el largo de pluma actual.

Para ello, los requisitos previos son los siguientes:

 La superficie sometida al viento (A<sub>W</sub>) de la carga de elevación no es superior a 1,2 m<sup>2</sup>/t

¡Si la superficie sometida al viento  $(A_W)$  de la carga de elevación es superior a 1,2 m²/t, se debe volver a medir la velocidad de viento máximo autorizado  $(v_{m\acute{a}x})!$ 

## 16.3.1 Medida de la velocidad de viento máximo autorizado

Con los métodos siguientes, se puede medir la velocidad de viento máximo autorizado:

- 1.) Cálculo con fórmula
- 2.) Medida con diagramas de escalas de viento

#### 16.3.2 Cálculo de la velocidad de viento máximo autorizado con fórmula

$$V_{\text{max}} = V_{\text{max\_TAB}} \times \sqrt{\frac{1,2\frac{m^2}{t} \times m_{\text{H}}}{A_{\text{W}}}}$$

Fórmula para calcular la velocidad de viento máximo autorizado

Para el cálculo se requieren los siguientes datos:

- Velocidad de viento máximo autorizado de acuerdo con la tabla de cargas  $(v_{m\acute{a}x\ TAB})$
- Carga de elevación (m<sub>H</sub>)
- Superficie de proyección de la carga de elevación (A<sub>P</sub>)
- Coeficiente de resistencia al viento (c<sub>W</sub>)

Descripción del procedimiento:

- 1.) Cálculo de la superficie sometida al viento  $(A_W = A_P \times c_W)$
- 2.) Control si la superficie sometida al viento  $A_W$  sobrepasa el valor límite de 1 2  $m^2/t$
- 3.) Cálculo de la velocidad de viento máximo autorizado (v<sub>máx</sub>)

## Ejemplo para calcular la velocidad de viento máximo autorizado

Datos para calcular el estado de carga:

$$v_{m\acute{a}x\_TAB} = 9.0 \text{ m/s}$$
 $m_H = 50.0 \text{ t}$ 
 $A_P = 70.0 \text{ m}^2$ 
 $c_W = 1.4$ 

## Procedimiento 1: Cálculo de la superficie sometida al viento

$$A_W = A_P \times c_W$$
 $A_W = 70.0 \text{ m}^2 \times 1.4$ 
 $A_W = 98.0 \text{ m}^2$ 

## Resultado:

- La superficie sometida al viento A<sub>W</sub> es de : 98,0 m<sup>2</sup>

# Procedimiento 2: Control si la superficie sometida al viento $A_W$ sobrepasa el valor límite de 1,2 $m^2/t$

La superficie sometida al viento por tonelada de carga de elevación es de:  $98.0 \text{ m}^2 / 50 \text{ t} = 1.96 \text{ m}^2/\text{t}$ 

## Resultado:

- La superficie sometida al viento por toneladas de carga de elevación sobrepasa el valor límite de 1,2 m<sup>2</sup>/t.
- ▶ ¡La velocidad de viento máximo autorizado debe volverse a calcular!

## Procedimiento 3: Cálculo de la velocidad de viento máximo autorizado

$$V_{\text{max}} = V_{\text{max\_TAB}} \times \sqrt{\frac{1,2\frac{m^2}{t} \times m_{\text{H}}}{A_{\text{W}}}}$$

$$V_{\text{max}} = 9 \frac{m}{s} \times \sqrt{\frac{1,2\frac{m^2}{t} \times 50t}{98 m^2}}$$

$$V_{\text{max}} = 7,04 \frac{m}{s}$$

## Resultado:

- La velocidad de viento máximo autorizado es de: 7,04 m/s

## 16.3.3 Medida de la velocidad de viento máximo autorizado con diagramas de escalas de viento

Dependiendo de la velocidad de viento máximo autorizado de acuerdo con la tabla de cargas ( $v_{máx\_TAB}$ ), la velocidad de viento máximo autorizado ( $v_{máx}$ ) puede medirse para el estado de carga con los siguientes diagramas de escalas de viento.

Presentación del diagrama de escalas de viento:

- Diagrama 7,0 m/s: Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado (v<sub>máx TAB</sub>) de 7,0 m/s
- **Diagrama 8,6 m/s:** Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\ TAB}$ ) de 8,6 m/s
- Diagrama 9,0 m/s: Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado (v<sub>máx TAB</sub>) de 9,0 m/s
- Diagrama 9,9 m/s: Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado (v<sub>máx TAB</sub>) de 9,9 m/s
- Diagrama 11,1 m/s: Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado (v<sub>máx TAB</sub>) de 11,1 m/s
- **Diagrama 12,8 m/s:** Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\ TAB}$ ) de 12,8 m/s
- Diagrama 14,3 m/s: Diagramas de escalas de viento para tablas de cargas con una velocidad de viento máximo autorizado (v<sub>máx TAB</sub>) de 14,3 m/s



## **AVISO**

¡Peligro de accidentes al confundirse de diagrama de escala de viento!

▶ ¡La velocidad de viento máximo autorizado según la tabla de cargas (v<sub>máx\_TAB</sub>) debe coincidir con la velocidad de viento máximo autorizado del diagrama de escala de viento!

Para medir se requieren los siguientes datos:

- Velocidad de viento máximo autorizado de acuerdo con la tabla de cargas (v<sub>máx\_TAB</sub>)
- Carga de elevación (m<sub>H</sub>)
- Superficie de proyección de la carga de elevación (A<sub>P</sub>)
- Coeficiente de resistencia al viento (c<sub>W</sub>)

Descripción del procedimiento:

- 1.) Cálculo de la superficie sometida al viento  $(A_W = A_P \times c_W)$
- Control si la superficie sometida al viento A<sub>W</sub> sobrepasa el valor límite de 1 2 m<sup>2</sup>/t
- 3.) Medida de la velocidad de viento máximo autorizado ( $v_{máx}$ ) tomada del respectivo diagrama de escala de viento

## Ejemplo para medir la velocidad de viento máximo autorizado

Datos para calcular el estado de carga:

$$v_{m\acute{a}x\_TAB} = 9.0 \text{ m/s}$$
  
 $m_H = 50.0 \text{ t}$   
 $A_P = 70.0 \text{ m}^2$   
 $c_W = 1.4$ 

## Procedimiento 1: Cálculo de la superficie sometida al viento

$$A_W = A_P \times c_W$$
 $A_W = 70.0 \text{ m}^2 \times 1.4$ 
 $A_W = 98.0 \text{ m}^2$ 

## Resultado:

- La superficie sometida al viento  $A_{W}$  es de : 98,0  $m^{2}$ 

# Procedimiento 2: Control si la superficie sometida al viento $A_W$ sobrepasa el valor límite de 1,2 $m^2/t$

La superficie sometida al viento por tonelada de carga de elevación es de:  $98.0 \text{ m}^2 / 50 \text{ t} = 1,96 \text{ m}^2/\text{t}$ 

## Resultado:

- La superficie sometida al viento por toneladas de carga de elevación sobrepasa el valor límite de 1,2 m<sup>2</sup>/t.
- ► ¡La velocidad de viento máximo autorizado debe volverse a medir!

# Procedimiento 3: Medida de la velocidad de viento máximo autorizado $(v_{máx})$ tomada del respectivo diagrama de escala de viento

Medida de la velocidad de viento máximo autorizado ( $v_{máx}$ ) tomada del respectivo diagrama de escala de viento para las tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx}$  TAB) de 9 m/s.

Diagrama de 9,0 m/s

## Resultado:

- La velocidad de viento máximo autorizado es de: 7,04 m/s

## 16.3.4 Diagramas de escala de viento



Diagrama de escala de viento de 7,0 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 7,0 m/s.



Diagrama de escala de viento de 8,6 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 8,6 m/s.



Diagrama de escala de viento de 9,0 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 9,0 m/s.



Diagrama de escala de viento de 9,9 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 9,9 m/s.



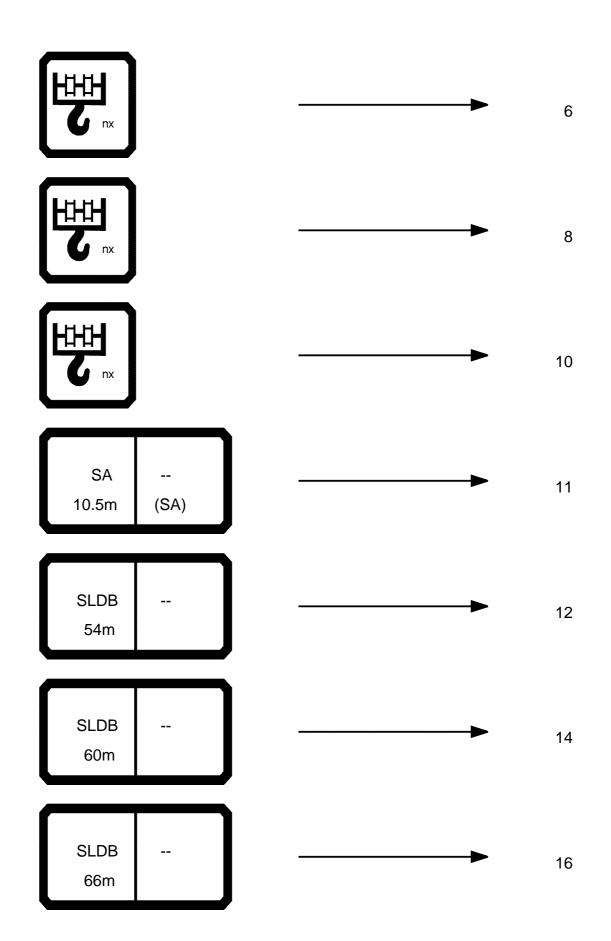
Diagrama de escala de viento de 11,1 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 11,1 m/s.

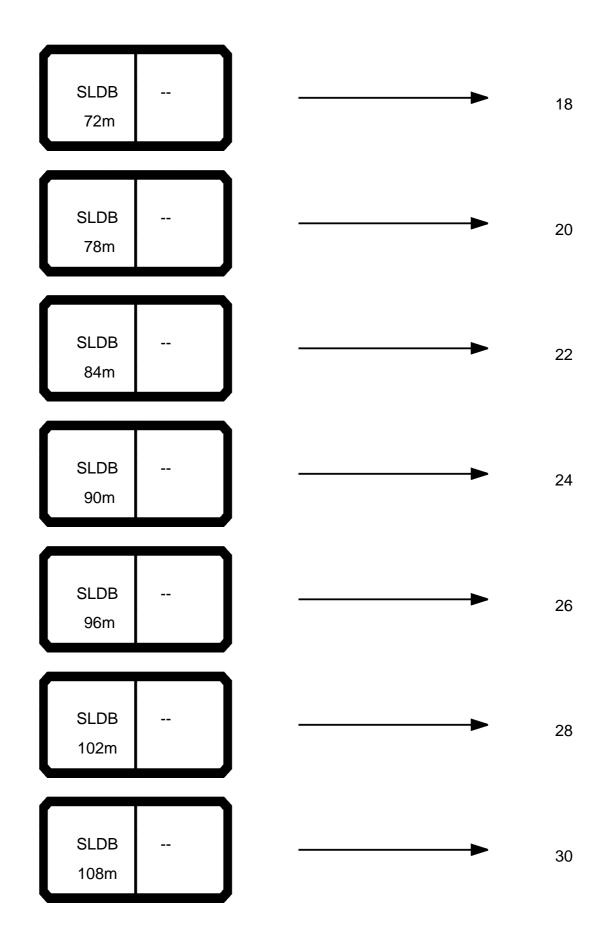


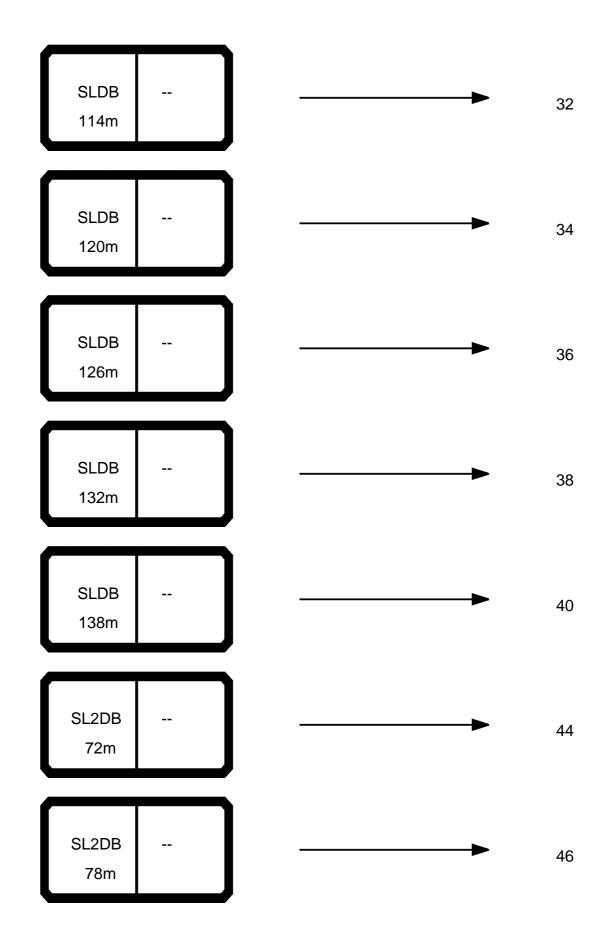
Diagrama de escala de viento de 12,8 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 12,8 m/s.

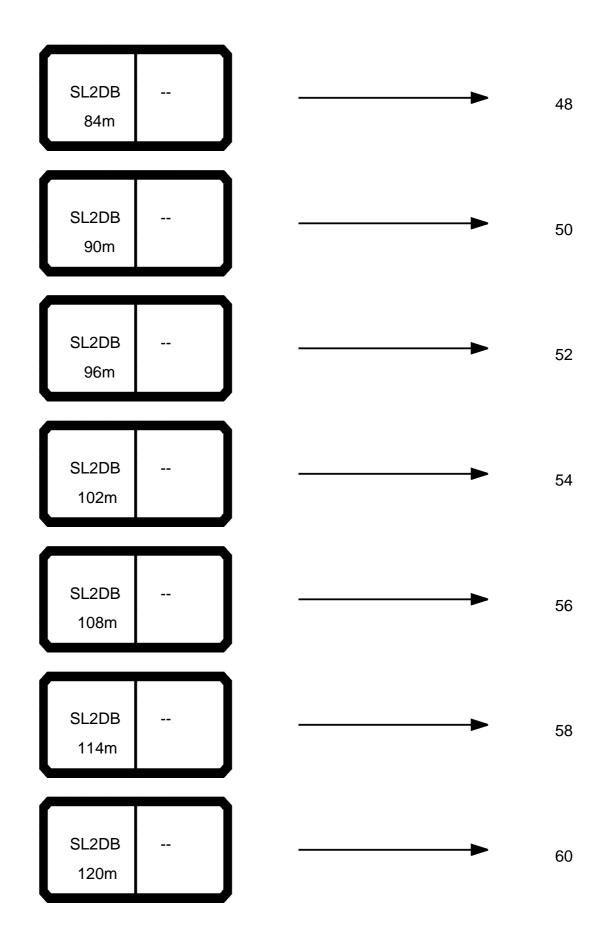


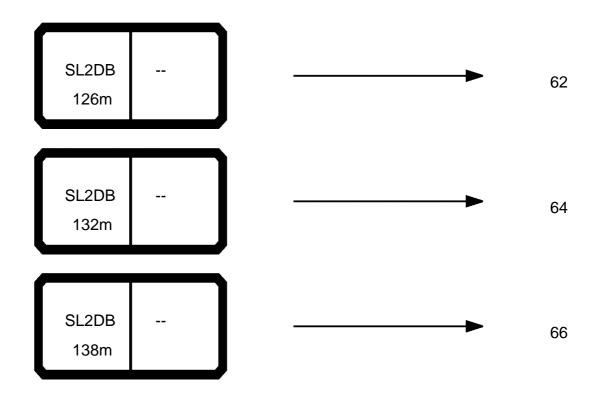
Diagrama de escala de viento de 14,3 m/s para tablas de cargas con una velocidad de viento máximo autorizado ( $v_{máx\_TAB}$ ) de 14,3 m/s.











typ1: D=28.0 mm

C nx	
1	18,1
2 3	35,9
3	53,4 70,7 87,7
4	70,7
5	87,7
6	104.5
7	121,0 137,2
8	137,2
9	153,2
10	169,0
11	169,0 184,5
12	199,9
13 14	214,9 229,8
14	229,8
15	244.4
16	258,8 273,0
17	273,0
18	1 287.0
19	300,8 314,3
20	314,3
20 21	327,7
22	340,8
23	353,8
24	366,6
25	379,1 391,5
26	391,5
27	403,7
28	415,7
29	427,6
30	439,2
31	450,7
32	462,0
33	473,2
34	484,2
35	495,0
36	505,6
37	516,1
38	526,4
39	536,6
40	546,6

41	556,5
42	566,2
43	575,8
44	585,2
45	594,5
46	603,7
47	612,7
48	621,6
49	630,3
50	639,0

typ2: D=25.0 mm

<b>C</b> nx	₹ t
1	12,6
2 3	12,6 24,9
3	37,1
4	49,1
5	60,9
6	37,1 49,1 60,9 72,5 84,0
7	84,0
8	1 95.3
9	106,4 117,4 128,2
10	117,4
11	128,2
12 13 14	138,8
13	149,3 159,6
14	159,6
15	169,7
16	179,7 189,6
17	189,6
18	199,3
19 20 21 22 23	208,9 218,3
20	218,3
21	227,5 236,7
22	236,7
23	245,7
24	254,6
25	263,3 271,9
26	271,9
27	280,4
28	288,7
29	296,9
30	305,0
31	313,0
32	320,9
33	328,6
34	336,2
35	343,7
36	351,1
37	358,4
38	365,6
39	372,6
40	379,6

41	386,5
42	393,2
43	399,9
44	406,4
45	412,9
46	419,2
47	425,5
48	431,7
49	437,7
50	443,7

typ3: D=28.0 mm

C nx	T
1	16,1
2	31,9
2 3 4	47,5
4	62,8
5	78,0
6 7	92,8
	107,5
8	122,0
9	136,2
10	150,2
11	150,2 164,0
12	177.6
13 14	191,0 204,2
14	204,2
15	217,2 230,1 242,7
16	230,1
17	242,7
18	255,1
19	267,3
20 21 22	279,4
21	291,3
22	303,0
23	314,5
24	325,8
25	337,0
26	348,0
27	358,9



\*\*\* 083 22.00 074548 CODE >  $0001 < V181\ 0101\ x(x)$ m >< t 10,5 47,0 47,0 47,0 47,0 3,0 3,5 4,0 4,5 5,0 45,0 5,5 42,0 6,0 37,5 6,5 33,0 7,0 28,0 7,5 25,9 8,0 23,7 8,5 21,5 19,0 17,8 16,3 9,0 9,5 10,0 10,5 15,0 11,0 13,5 \* n \* 0 14,3 m/s SA (SA) 10.5m



074548					^^^ 221									
	MM	] i n	n ><	t	CO	DE	> 54	127	<	V18	31 2	D00	.x(x	()
m m	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0
9,0	307,0	307,0	307,0	307,0	307,0	307,0	307,0	307,0	306,0	306,0	306,0	306,0	306,0	306,0
10,0	283,0	308,0	308,0	308,0	308,0	308,0	308,0	308,0	287,0	306,0	306,0	306,0	306,0	306,0
11,0	254,0	306,0	308,0	308,0	308,0	308,0	308,0	308,0	258,0	305,0	308,0	308,0	308,0	308,0
12,0	230,0	293,0	310,0	310,0	310,0	310,0	310,0	310,0	233,0	296,0	310,0	310,0	310,0	310,0
14,0	192,0	247,0	301,0	309,0	309,0	309,0	309,0 317,0	309,0	195,0	257,0	308,0	309,0 299,0	309,0	309,0
16,0	164,0	212,0	259,0	289,0	308,0	317,0		317,0	167,0	221,0	275,0		317,0	317,0
18,0	142,0	185,0	227,0	268,0	300,0	315,0	315,0	315,0	145,0	193,0	241,0	286,0	315,0	315,0
20,0	125,0	163,0	201,0	239,0	271,0	290,0	297,0	297,0	127,0	170,0	214,0	257,0	287,0	296,0
22,0	111,0	145,0	180,0	215,0	243,0	264,0	279,0	294,0	112,0	152,0	192,0	230,0	260,0	277,0
24,0	97,0	130,0	163,0	192,0	218,0	241,0	260,0	279,0	99,0	136,0	173,0	205,0	235,0	259,0
26,0	86,0	116,0	146,0	176,0	200,0	223,0	241,0	259,0	87,0	121,0	155,0	188,0	216,0	239,0
28,0	77,0	104,0	132,0	160,0	183,0	204,0	222,0	239,0	78,0	109,0	140,0	170,0	198,0	220,0
30,0	69,0	95,0	120,0	145,0	166,0	187,0	204,0	220,0	70,0	99,0	127,0	155,0	180,0	202,0
32,0	63,0	86,0	110,0	133,0	156,0	175,0	192,0	207,0	64,0	90,0	116,0	142,0	169,0	189,0
34,0	57,0	79,0	101,0	123,0	145,0	163,0	179,0	194,0	58,0	82,0	107,0	131,0	156,0	177,0
36,0	52,0	73,0	93,0	114,0	134,0	151,0	167,0	181,0	53,0	76,0	99,0	122,0	145,0	164,0
38,0	47,5	67,0	86,0	106,0	125,0	141,0	157,0	170,0	48,5	70,0	92,0	113,0	135,0	154,0
40,0	43,5	62,0	80,0	98,0	117,0	133,0	148,0	161,0	44,5	65,0	85,0	106,0	126,0	146,0
44,0	37,0	54,0	70,0	86,0	103,0	117,0	131,0	143,0	38,0	56,0	75,0	93,0	111,0	128,0
48,0	32,0	47,0	62,0	77,0	92,0	105,0	118,0	130,0	32,5	49,0	66,0	83,0	99,0	116,0
52,0	27,5	41,5	55,0	69,0	82,0	95,0	106,0	118,0	28,2	43,5	59,0	74,0	89,0	104,0
* n *	20	20	20	20	20	21	21	21	20	20	20	20	21	21
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>ZZ</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
<b>0-40</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
											_			
		LDB 4m			15 t	50	14 14	1,0 x ,0 I	N N N N N N N N N N N N N N N N N N N	zz t m				



m 54,0 54,0 54,0 54,0 54,0 54,0 54,0 54,0	4548					*** 221										22.0	
9,0 306,0 306,0 305,0 305,0 305,0 305,0 305,0 305,0 305,0 305,0 305,0 306,0 10,0 306,0 306,0 294,0 307			l ı	n ><	t	CO	DE	> 54	427	<	V18	31	2D	000	).x(x)		
10,0 306,0 306,0 294,0 307,0 307,0 307,0 307,0 307,0 307,0 307,0 307,0 309,0 308,0 308,0 308,0 308,0 308,0 308,0 308,0 308,0 308,0 308,0 309,0 3	m m	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0						
11,0 308,0 308,0 264,0 307,0 309,0 309,0 309,0 309,0 309,0 309,0 120,0 310,0 320,0 220,0 281,0 090,0 116,0 160,0 180,0 120,0 280,0 280,0 300,0 128,0 160,0 151,0 186,0 218,0 243,0 267,0 284,0 300,0 210,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 287,0 32,0 200,0 225,0 65,0 96,0 128,0 156,0 154,0 187,0 210,0 231,0 252,0 32,0 32,0 32,0 32,0 32,0 32,0 32,0 3	9,0																
12.0 310.0 310.0 239.0 303.0 310.0 310.0 310.0 310.0 310.0 310.0 310.0 140.0 317.0 3																	
14,0 309,0 309,0 200,0 273,0 308,0 312,0 312,0 312,0 312,0 312,0 160, 316,0 31																	
16,0 317,0 317,0 171,0 235,0 287,0 314,0 316,0 316,0 316,0 316,0 180,0 315,0 315,0 148,0 205,0 262,0 310,0 313,0 313,0 313,0 321,0 22,0 305,0 314,0 130,0 182,0 233,0 280,0 294,0 307,0 318,0 321,0 22,0 240,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 284,0 311,0 319,0 26,0 260,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 263,0 284,0 311,0 319,0 26,0 280,0 210,0 259,0 80,0 116,0 151,0 186,0 218,0 243,0 267,0 284,0 33,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 284,0 33,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 284,0 33,0 321,0 252,0 34,0 136,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 33,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 230,0 225,0 34,0 161,0 176,0 46,0 690,0 93,0 116,0 140,0 163,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 46,0 690,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126																	
18,0 315,0 315,0 148,0 205,0 262,0 310,0 313,0 313,0 313,0 313,0 320,0 395,0 314,0 130,0 182,0 233,0 280,0 294,0 307,0 318,0 321,0 22,0 294,0 312,0 115,0 162,0 209,0 250,0 275,0 297,0 319,0 324,0 24,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 284,0 311,0 319,0 26,0 280,0 281,0 90,0 128,0 150,0 151,0 186,0 218,0 243,0 267,0 284,0 300,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 260,0 267,0 284,0 30,0 128,0 156,0 187,0 156,0 187,0 156,0 187,0 210,0 231,0 252,0 33,0 181,0 197,0 54,0 81,0 110,0 144,0 173,0 196,0 217,0 236,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 200,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 144,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 152,0 149,0 152,0 149,0 150,0 150,0 183,0 292,0 21,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0 12																	
20,0 305,0 314,0 130,0 182,0 233,0 280,0 294,0 307,0 318,0 321,0 220,0 294,0 312,0 115,0 162,0 209,0 250,0 275,0 297,0 319,0 324,0 240,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 284,0 311,0 319,0 260,0 281,0 90,0 128,0 167,0 206,0 237,0 263,0 289,0 302,0 28,0 302,0 32,0 32,0 32,0 32,0 32,0 32,0 3																	
22,0 294,0 312,0 115,0 162,0 209,0 250,0 275,0 297,0 319,0 324,0 240,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 284,0 311,0 319,0 26,0 260,0 281,0 90,0 128,0 167,0 206,0 237,0 263,0 289,0 302,0 28,0 240,0 259,0 80,0 116,0 151,0 186,0 218,0 243,0 267,0 284,0 32,0 208,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 32,0 206,0 225,0 65,0 96,0 126,0 156,0 187,0 210,0 231,0 252,0 34,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 444,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 44,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0											, ,						
24,0 281,0 303,0 101,0 144,0 186,0 225,0 256,0 284,0 311,0 319,0 260,0 281,0 90,0 128,0 167,0 206,0 237,0 263,0 289,0 302,0 280,0 280,0 116,0 151,0 186,0 218,0 243,0 267,0 284,0 30,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 32,0 252,0 65,0 96,0 196,0 156,0 187,0 210,0 231,0 252,0 34,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29.2 47,0 64,0 82,0 100,0 117,0 126,									297.0								
26,0 260,0 281,0 90,0 128,0 167,0 206,0 237,0 263,0 289,0 302,0 28,0 240,0 259,0 80,0 116,0 151,0 186,0 218,0 243,0 267,0 284,0 30,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 32,0 280,0 225,0 65,0 96,0 126,0 156,0 187,0 210,0 231,0 252,0 34,0 184,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0 126,0 126,0 127,0 128,0																	
28,0 240,0 259,0 80,0 116,0 151,0 186,0 218,0 243,0 267,0 284,0 32,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 32,0 220,0 225,0 65,0 96,0 126,0 166,0 187,0 210,0 231,0 252,0 34,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0																	
30,0 221,0 239,0 72,0 105,0 137,0 170,0 200,0 223,0 246,0 267,0 32,0 196,0 197,0 126,0 187,0 120,0 210,0 231,0 252,0 194,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0 1																	
32,0 208,0 225,0 65,0 96,0 126,0 156,0 187,0 210,0 231,0 252,0 34,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 145,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0 12																	
34,0 194,0 211,0 59,0 88,0 116,0 144,0 173,0 196,0 217,0 236,0 36,0 181,0 197,0 54,0 81,0 107,0 134,0 160,0 183,0 202,0 221,0 38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126																	
38,0 171,0 186,0 50,0 75,0 100,0 125,0 149,0 172,0 191,0 208,0 40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0 126,0 126,0 100,0 117,0 126	34,0	194,0		59,0	88,0	116,0	144,0	173,0	196,0	217,0	236,0						
40,0 161,0 176,0 46,0 69,0 93,0 116,0 140,0 163,0 181,0 198,0 44,0 143,0 156,0 39,0 60,0 81,0 102,0 124,0 145,0 161,0 176,0 48,0 130,0 142,0 33,5 53,0 72,0 91,0 110,0 130,0 145,0 152,0 52,0 118,0 128,0 29,2 47,0 64,0 82,0 100,0 117,0 126,0																	
44,0       143,0       156,0       39,0       60,0       81,0       102,0       124,0       145,0       161,0       176,0         48,0       130,0       142,0       33,5       53,0       72,0       91,0       110,0       130,0       145,0       152,0         52,0       118,0       128,0       29,2       47,0       64,0       82,0       100,0       117,0       126,0       126,0         *n*       21       21       20       20       20       21       21       21       21         yy       15.0       15.0       18.0       18.0       18.0       18.0       18.0       18.0       18.0         zz       300.0       350.0       0.0       50.0       100.0       150.0       200.0       250.0       300.0       350.0																	
*n* 21 21 20 20 20 20 21 21 21 21 21 yy																	
*n* 21 21 20 20 20 20 21 21 21 21 21 yy 15.0 15.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18																	
*n* 21 21 20 20 20 20 21 21 21 21 21 yy 15.0 15.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18																	
yy	32,0	110,0	120,0	23,2	47,0	0-1,0	02,0	100,0	117,0	120,0	120,0						
yy																	
yy 15.0 15.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	* n *	21	21	20	20	20	20	21	21	21	21						
22 300.0 350.0 0.0 50.0 100.0 150.0 200.0 250.0 300.0 350.0																	
<b>ZZ</b> 300.0 350.0 0.0 50.0 100.0 150.0 200.0 250.0 300.0 350.0	уу						18.0										
	<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0						
	ļ																
																L	
m/s 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0	<b>40</b>																
	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0						
									<del>                                     </del>	<del>                                     </del>							



074548					^^^ 221										
	MM	l i r	n ><	t	CO	DE	> 54	128	<	V18	31 2	E00	.x(x	()	
m m	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	
10,0	270,0	303,0	303,0	303,0	303,0	303,0	303,0	303,0	274,0	303,0	303,0	303,0	303,0	303,0	
11,0	243,0	304,0	305,0	305,0	305,0	305,0	305,0	305,0	247,0	305,0	305,0	305,0	305,0	305,0	
12,0	220,0	282,0	303,0	306,0	306,0	306,0	306,0	306,0	224,0	294,0	305,0	306,0	306,0	306,0	
14,0 16,0	185,0 158,0	238,0 205,0	291,0 251,0	310,0 294,0	310,0 301,0	310,0 301,0	310,0 301,0	310,0 301,0	188,0 161,0	248,0 214,0	303,0 266,0	308,0 296,0	308,0 305,0	308,0 305,0	
18,0	137,0	179,0	220,0	261,0	286,0	303,0	316,0	316,0	140,0	187,0	234,0	274,0	298,0	316,0	
20,0	121,0	158,0	195,0	232,0	267,0	291,0	308,0	309,0	123,0	165,0	208,0	250,0	284,0	308,0	
22,0	107,0	141,0	175,0	209,0	243,0	266,0	284,0	291,0	109,0	148,0	186,0	225,0	260,0	283,0	
24,0	96,0	127,0	158,0	189,0	219,0	242,0	260,0	273,0	98,0	133,0	168,0	204,0	235,0	258,0	
26,0	86,0	115,0	144,0	172,0	197,0	219,0	237,0	255,0	87,0	120,0	153,0	185,0	212,0	235,0	
28,0	76,0	104,0	131,0	158,0	182,0	203,0	221,0	238,0	78,0	108,0	139,0	170,0	196,0	219,0	
30,0	69,0	94,0	119,0	145,0	167,0	187,0	205,0	221,0	70,0	98,0	126,0	155,0	181,0	203,0	
32,0	62,0	86,0	109,0	133,0	153,0	172,0	189,0	204,0	63,0	89,0	116,0	142,0	165,0	187,0	
34,0	56,0	78,0	100,0	122,0	142,0	160,0	177,0	191,0	57,0	82,0	106,0	131,0	154,0	175,0	
36,0 38,0	51,0	72,0	92,0	113,0 105,0	133,0	150,0	167,0	180,0	52,0	75,0	98,0	121,0	144,0 134,0	164,0	
38,0 40,0	47,0	66,0 61,0	85,0 79,0	98,0	124,0 115,0	140,0 131,0	156,0 146,0	169,0 158,0	47,5 43,5	69,0	91,0	112,0 105,0	134,0	154,0 143,0	
44,0	43,0 36,5	53,0	79,0 69,0	96,0 86,0	102,0	117,0	131,0	143,0	43,5 37,0	64,0 55,0	84,0 74,0	92,0	110,0	128,0	
48,0	31,0	46,0	61,0	76,0	91,0	104,0	116,0	128,0	31,5	48,5	65,0	82,0	98,0	114,0	
52,0	26,3	40,0	54,0	68,0	81,0	93,0	105,0	117,0	27,0	42,5	58,0	73,0	88,0	103,0	
56,0	22,4	35,5	48,0	61,0	73,0	84,0	95,0	106,0	23,0	37,5	52,0	66,0	80,0	93,0	
60,0	19,3	32,0	43,5	55,0	67,0	77,0	87,0	94,0	19,9	33,5	46,5	60,0	73,0	84,0	
* n *	17	20	20	20	20	20	21	21	18	20	20	20	20	21	
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	
0-40															
m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	
	s	LDB					14	1,0 x							
	6	150 t 14,0 x yy m													



074548					*** 221 22.0									
		] i r	n ><	t	СО	DE	> 54	128			31 2	E00	.x(x	()
m m	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0	60,0				
10,0	303,0	303,0	281,0	303,0	303,0	303,0	303,0		303,0	303,0				
11,0	305,0	305,0	252,0		305,0		305,0			305,0				
12,0 14,0	306,0 308,0	306,0 308,0	229,0 192,0	301,0 264,0	306,0 308,0	306,0 308,0	306,0 308,0	306,0 308,0	306,0 308,0	306,0 308,0				
16,0	305,0	305,0	165,0	227,0	290,0	302,0	312,0	312,0	312,0	312,0				
18,0	316,0	316,0	143,0	199,0	255,0	292,0	316,0	316,0	316,0	316,0				
20,0	309,0	309,0	126,0	176,0	226,0	276,0	308,0	308,0	308,0	308,0				
22,0	291,0		112,0	158,0	203,0	249,0	282,0			315,0				
24,0	274,0	289,0	100,0	142,0	184,0	226,0	257,0		295,0	314,0				
26,0	256,0	277,0	89,0		166,0	203,0	233,0 217,0	259,0	284,0	309,0				
28,0 30,0	239,0 222,0	259,0 240,0	80,0 71,0	115,0 104,0	150,0 137,0	186,0 170,0	201,0	242,0 225,0	266,0 247,0	289,0 269,0				
32,0	205,0	222,0	65,0	95,0	125,0	156,0	184,0	207,0	228,0	248,0				
34,0	192,0	209,0	59,0	87,0	115,0	144,0	172,0			234,0				
36,0	181,0	197,0	54,0	80,0	107,0	133,0	159,0	183,0	202,0	221,0				
38,0	170,0	185,0	49,0	74,0	99,0	124,0	149,0	172,0	190,0	208,0				
40,0	159,0	174,0	45,0	68,0	92,0	115,0	139,0	160,0	178,0	195,0				
44,0	143,0	157,0	38,0	59,0	80,0	102,0	123,0	144,0	161,0	176,0				
48,0	128,0 116,0	141,0	32,5	52,0 45,5	71,0 63,0	90,0	109,0	129,0	145,0	159,0				
52,0 56,0	105,0	128,0 117,0	27,9 23,9	40,5	57,0	81,0 73,0	98,0 89,0	116,0 106,0		141,0 122,0				
60,0	92,0	99,0	20,7	36,5	52,0	67,0	80,0	89,0	92,0	92,0				
33,0	02,0	00,0		00,0	0_,0	0.,0	30,0	30,0	02,0	02,0				
* n *	21	21	18	20	20	20	21	21	21	21				
	45.0	45.0	40.0	40.0	10.0	40.0	40.0	40.0	40.0	40.0				
уу	15.0 300.0	15.0 350.0	18.0 0.0	18.0 50.0	18.0 100.0	18.0 150.0	18.0 200.0	18.0 250.0	18.0 300.0	18.0 350.0				
<b>ZZ</b>	300.0	330.0	0.0	50.0	100.0	150.0	200.0	230.0	300.0	350.0				
<u>_40</u>														
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
<b>Ш</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
										<b>A</b>			1	
	S	LDB	l			<u> </u>	14	1,0 X	W.				II	
					15	:0	14						II	
	6	0m				,,,	<b>▲</b> 14	,u 👗		y <sub>zz t</sub>			II	



074548						*** 221 22.00											
			l i n	n ><	t	CO	DE	> 54	129	<	V18	31 2	F00	.x(x	)		
	m	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0		
	0,0		299,0	299,0	299,0	299,0	299,0	299,0	299,0		299,0	300,0	300,0	300,0	300,0		
	1,0	232,0	297,0	301,0	301,0	301,0	301,0	301,0	301,0	236,0	301,0	301,0	301,0	301,0	301,0		
	2,0	211,0	271,0	302,0	302,0	302,0	302,0	302,0	302,0	214,0	282,0	302,0	302,0	302,0	302,0		
	4,0 6,0	178,0 152,0	229,0 197,0	280,0 242,0	301,0 288,0	306,0 309,0	306,0 309,0	306,0 309,0	306,0 309,0	180,0 155,0	239,0 206,0	291,0 258,0	305,0 308,0	305,0 308,0	305,0 308,0		
	8,0 8,0	132,0	173,0	213,0	253,0	285,0	293,0	293,0	293,0	135,0	180,0	226,0	272,0	290,0	300,0		
	0,0	116,0	153,0	189,0	226,0	261,0	279,0	297,0	312,0	118,0	160,0	201,0	243,0	274,0	295,0		
	2,0	103,0	136,0	170,0	203,0	236,0	261,0	281,0	298,0	105,0	143,0	181,0	219,0	255,0	280,0		
	4,0	92,0	123,0	153,0	184,0	214,0	240,0	260,0	276,0	94,0	129,0	163,0	198,0	233,0	258,0		
	6,0	83,0	111,0	139,0	168,0	196,0	219,0	238,0	254,0	84,0	117,0	149,0	181,0	213,0	236,0		
28	8,0	75,0	101,0	127,0	154,0	177,0	199,0	217,0	233,0	76,0	106,0	136,0	166,0	192,0	214,0		
	0,0	68,0	92,0	117,0	142,0	165,0	186,0	203,0	219,0	69,0	97,0	125,0	153,0	179,0	201,0		
	2,0	61,0	84,0	108,0	131,0	153,0	173,0	190,0	204,0	62,0	88,0	114,0	141,0	166,0	187,0		
	4,0	55,0	77,0	99,0	121,0	141,0	159,0	176,0	190,0	56,0	81,0	105,0	130,0	153,0	173,0		
	6,0	50,0	71,0 65,0	91,0	112,0	130,0	147,0	164,0	177,0	51,0 46,5	74,0 68,0	97,0	120,0	141,0	161,0		
	8,0 0,0	45,5 41,5	60,0	84,0 78,0	104,0 96,0	122,0 115,0	139,0 130,0	155,0 145,0	168,0 158,0	40,5	63,0	90,0 83,0	111,0 104,0	133,0 124,0	152,0 143,0		
	4,0	35,0	51,0	68,0	84,0	100,0	114,0	127,0	140,0	36,0	54,0	72,0	91,0	109,0	125,0		
	8,0	29,5	44,5	59,0	74,0	89,0	102,0	115,0	127,0	30,0	47,0	64,0	80,0	97,0	113,0		
	2,0	24,7	39,0	53,0	66,0	80,0	91,0	103,0	115,0	25,4	41,0	56,0	72,0	87,0	101,0		
	6,0	20,7	34,0	46,5	59,0	72,0	82,0	93,0	104,0	21,4	36,0	50,0	64,0	78,0	91,0		
6	0,0	17,4	29,9	42,0	53,0	65,0	75,0	85,0	95,0	18,0	32,0	45,0	58,0	71,0	83,0		
64	4,0	14,7	26,3	37,5	48,5	59,0	68,0	77,0	87,0	15,2	28,2	40,5	53,0	65,0	76,0		
* n *		15	19	20	20	20	20	20	20	15	20	20	20	20	20		
уу		13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0		
<b>zz</b> _		0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0		
<b>0-40</b> m/	's	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0		
		S	LDB				<b>→</b> I	<b>-</b>	, o x								



74548							22.00							
	MM	l i r	n ><	t	CO	DE	> 54	129	<	V18	31 2	2F00	.x(x	)
m m	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0	66,0				
10,0	300,0	300,0		299,0	300,0	300,0	300,0	300,0	300,0	300,0				
11,0	301,0	301,0	242,0	301,0	301,0	301,0	301,0		301,0	301,0				
12,0	302,0	302,0	220,0	300,0	302,0	302,0	302,0	302,0	302,0	302,0				
14,0	305,0	305,0	185,0		300,0	304,0	304,0	304,0	304,0	304,0				
16,0	308,0	308,0	159,0	220,0	281,0	305,0	305,0	305,0	305,0	305,0				
18,0	309,0 312,0	309,0 312,0	138,0 121,0	192,0 171,0	247,0	286,0 267,0	300,0 295,0	309,0 312,0	309,0 312,0	309,0 312,0				
20,0 22,0	299,0	301,0	108,0	153,0	220,0 197,0	242,0	279,0	299,0	303,0	303,0				
24,0	277,0	285,0	96,0	138,0	179,0	220,0	256,0	278,0	289,0	299,0				
26,0	255,0	269,0	87,0	125,0	163,0	201,0	234,0		274,0	291,0				
28,0	234,0	253,0	78,0	114,0	149,0	183,0	212,0	237,0	260,0	282,0				
30,0	220,0	238,0	70,0	103,0	136,0	169,0	198,0	222,0	244,0	265,0				
32,0	205,0	223,0	64,0	94,0	124,0	155,0	184,0	207,0	229,0	249,0				
34,0	191,0	207,0	58,0	86,0	114,0	142,0	171,0	193,0	213,0	232,0				
36,0	178,0	193,0	52,0	79,0	105,0	132,0	158,0	180,0	199,0	217,0				
38,0	168,0	183,0	48,0	73,0	98,0	123,0	147,0	170,0	188,0	206,0				
40,0	159,0	173,0	44,0	67,0	91,0	114,0	138,0	161,0	178,0	195,0				
44,0	140,0	154,0	37,0	58,0	79,0	100,0	121,0		158,0	173,0				
48,0	127,0	140,0	31,5	51,0	70,0	89,0	108,0	127,0	143,0	158,0				
52,0 56,0	114,0 104,0	126,0 115,0	26,4 22,3	44,5 39,0	62,0 55,0	80,0 72,0	97,0 88,0	115,0 104,0	130,0 119,0	143,0 129,0				
60,0	95,0	106,0	18,8	35,0	50,0	65,0	80,0	95,0	109,0	115,0				
64,0	87,0	97,0	16,0	31,0	45,0	59,0	73,0	87,0	96,0	97,0				
	,	,	,	,	,	,	,	,	,	,				
* n *	20	20	15	20	20	20	20	20	20	20				
	45.0	45.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0				
уу	15.0	15.0	18.0	18.0	18.0 100.0	18.0	18.0 200.0	18.0 250.0	18.0	18.0				
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
≻ <b>∦o</b>														
<b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
- 1170														
		LDB 6m			15	50	14 14	4,0 x		Zz t				



07454	8						*** 221 22.0									
a d	<b>?</b>	MM	l n	n ><	t	CO	DE	> 54	130	<	V18	31 3	000	.x(x)		
	m	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	
	11,0	222,0	284,0	292,0	292,0	292,0	292,0	292,0	292,0	226,0	289,0	290,0	290,0	290,0	290,0	
	12,0	202,0	260,0	293,0	293,0	293,0	293,0	293,0	293,0	206,0	271,0	292,0	292,0	292,0	292,0	
	14,0	171,0	220,0	270,0	289,0	294,0	294,0	294,0	294,0	173,0	230,0	285,0	291,0	291,0	291,0	
	16,0	146,0	190,0	234,0	278,0	296,0	296,0	296,0	296,0	149,0	199,0	249,0	291,0	295,0	295,0	
	18,0 20,0	127,0 112,0	167,0 148,0	206,0 183,0	246,0 219,0	285,0 255,0	288,0 271,0	288,0 281,0	288,0 292,0	130,0 114,0	175,0 155,0	219,0 195,0	264,0	288,0 268,0	290,0	
	22,0	99,0	132,0	164,0	197,0	230,0	255,0	272,0	292,0	101,0	138,0	175,0	236,0 213,0	249,0	280,0 271,0	
	24,0	89,0	119,0	149,0	179,0	209,0	236,0	255,0	273,0	90,0	125,0	159,0	193,0	249,0	254,0	
	26,0	80,0	107,0	135,0	163,0	191,0	218,0	236,0	253,0	81,0	113,0	144,0	176,0	208,0	235,0	
	28,0	72,0	98,0	124,0	149,0	175,0	199,0	218,0	234,0	73,0	103,0	132,0	162,0	191,0	216,0	
	30,0	65,0	89,0	113,0	138,0	161,0	181,0	199,0	214,0	66,0	94,0	122,0	149,0	174,0	197,0	
	32,0	59,0	82,0	105,0	127,0	150,0	169,0	187,0	201,0	60,0	86,0	112,0	138,0	163,0	184,0	
	34,0	54,0	75,0	97,0	118,0	140,0	158,0	175,0	189,0	55,0	79,0	104,0	128,0	152,0	172,0	
	36,0	49,0	69,0	90,0	110,0	130,0	147,0	163,0	177,0	50,0	73,0	96,0	119,0	141,0	160,0	
	38,0	44,5	64,0	83,0	103,0	119,0	136,0	151,0	165,0	45,5	67,0	89,0	110,0	130,0	149,0	
	40,0	40,5	59,0	77,0	95,0	112,0	128,0	143,0	156,0	41,5	62,0	82,0	103,0	122,0	140,0	
	44,0	34,0	50,0	67,0	83,0	99,0	114,0	127,0	140,0	35,0	53,0	71,0	90,0	108,0	125,0	
	48,0	28,3	43,5	58,0	73,0	87,0	100,0	112,0	124,0	29,0	46,0	62,0	79,0	95,0	110,0	
	52,0	23,4	37,5	51,0	65,0	78,0	90,0	102,0	113,0	24,1	40,0	55,0	70,0	86,0	100,0	
	56,0	19,4	33,0 28,5	45,5	58,0	70,0 63,0	81,0 73,0	92,0	103,0	20,0 16,6	35,0	49,0	63,0 57,0	77,0 70,0	90,0 81,0	
	60,0 64,0	16,0 13,1	24,8	40,5 36,5	52,0 47,0	57,0	67,0	83,0 76,0	93,0 86,0	13,7	30,5 26,6	44,0 39,5	51,0	63,0	74,0	
	68,0	10,7	21,6	32,5	42,5	52,0	61,0	69,0	78,0	11,2	23,4	35,5	47,0	58,0	68,0	
	72,0	8,8	19,1	29,4	39,0	47,5	56,0	65,0	69,0	9,3	20,8	32,0	43,0	53,0	62,0	
	,0	0,0	, .		33,5	,0	00,0	00,0	00,0	0,0		02,0	10,0	00,0		
* n	*	14	18	19	19	19	19	19	19	14	19	19	19	19	19	
							. •									
у	у	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0	
z		0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	
0-40																
	,	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	
<b>U</b>	m/s	5,0	5,0	5,0	5,5	5,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
											A					
		Q	LDB					14	I,0 X	W.		1		I		
						4.5		1.								
		7:	2m			15	U	<b>I</b>	,U 👗		y zz t			l		
l	J					t		n	1	уу	m	l	_	Il	_	
•								4								



11,0 29 12,0 29 14,0 29 16,0 29 18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	90,0 92,0 91,0 95,0 90,0 93,0 92,0 75,0 35,0 16,0 03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	72,0 290,0 292,0 291,0 295,0 290,0 297,0 299,0 267,0 250,0 233,0 220,0 207,0 193,0 171,0 154,0 137,0	72,0 231,0 211,0 178,0 153,0 133,0 117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	72,0 290,0 288,0 245,0 212,0 186,0 165,0	72,0 290,0 290,0 287,0 272,0 239,0 213,0 192,0 174,0 159,0 145,0 134,0 123,0	72,0 290,0 290,0 292,0 294,0 285,0 262,0 236,0 214,0 196,0 180,0	<b>72,0</b> 290,0 290,0 294,0 294,0 290,0 270,0 252,0 233,0 214,0	72,0 290,0 290,0 292,0 294,0 290,0 295,0	72,0 290,0 290,0 292,0 294,0 290,0 297,0 298,0 284,0	72,0 290,0 290,0 292,0 294,0 297,0 298,0 284,0	31 3	8000	.x(x	)
11,0 29 12,0 29 14,0 29 16,0 29 18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	90,0 92,0 91,0 95,0 90,0 93,0 92,0 75,0 35,0 16,0 03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	290,0 291,0 295,0 297,0 297,0 299,0 284,0 267,0 250,0 207,0 193,0 180,0 171,0	231,0 211,0 178,0 153,0 133,0 117,0 93,0 83,0 75,0 68,0 62,0 57,0 47,0	290,0 288,0 245,0 212,0 186,0 165,0 148,0 133,0 121,0 110,0 93,0	290,0 290,0 287,0 272,0 239,0 213,0 192,0 174,0 159,0 145,0	290,0 290,0 292,0 294,0 285,0 262,0 236,0 214,0 196,0 180,0	290,0 290,0 292,0 294,0 290,0 280,0 270,0 252,0 233,0	290,0 290,0 292,0 294,0 290,0 295,0 295,0 278,0	290,0 290,0 292,0 294,0 290,0 297,0 298,0 284,0	290,0 290,0 292,0 294,0 290,0 297,0 298,0				
12,0 29 14,0 29 16,0 29 18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	92,0 91,0 95,0 90,0 93,0 92,0 75,0 55,0 35,0 16,0 03,0 90,0 78,0 65,0 40,0 24,0 13,0 02,0	292,0 291,0 295,0 290,0 297,0 299,0 284,0 250,0 233,0 220,0 193,0 180,0 171,0	211,0 178,0 153,0 133,0 117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0 47,0	288,0 245,0 212,0 186,0 165,0 148,0 133,0 121,0 110,0 93,0	290,0 287,0 272,0 239,0 213,0 192,0 174,0 159,0 145,0	290,0 292,0 294,0 285,0 262,0 236,0 214,0 196,0 180,0	290,0 292,0 294,0 290,0 280,0 270,0 252,0 233,0	290,0 292,0 294,0 290,0 295,0 295,0 278,0	290,0 292,0 294,0 290,0 297,0 298,0 284,0	290,0 292,0 294,0 290,0 297,0 298,0				
14,0 29 16,0 29 18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	91,0 95,0 90,0 93,0 92,0 75,0 55,0 35,0 16,0 03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	291,0 295,0 297,0 297,0 299,0 284,0 267,0 250,0 233,0 220,0 193,0 180,0 171,0	178,0 153,0 133,0 117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	245,0 212,0 186,0 165,0 148,0 133,0 121,0 110,0 93,0	287,0 272,0 239,0 213,0 192,0 174,0 159,0 145,0	292,0 294,0 285,0 262,0 236,0 214,0 196,0 180,0	292,0 294,0 290,0 280,0 270,0 252,0 233,0	292,0 294,0 290,0 295,0 295,0 278,0	292,0 294,0 290,0 297,0 298,0 284,0	292,0 294,0 290,0 297,0 298,0				
16,0 29 18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	95,0 90,0 93,0 92,0 75,0 55,0 35,0 16,0 03,0 90,0 78,0 65,0 40,0 24,0 13,0 02,0	295,0 290,0 297,0 299,0 284,0 250,0 233,0 220,0 207,0 193,0 171,0 154,0	153,0 133,0 117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	212,0 186,0 165,0 148,0 133,0 121,0 110,0 93,0	272,0 239,0 213,0 192,0 174,0 159,0 145,0 134,0	294,0 285,0 262,0 236,0 214,0 196,0 180,0	294,0 290,0 280,0 270,0 252,0 233,0	294,0 290,0 295,0 295,0 278,0	294,0 290,0 297,0 298,0 284,0	294,0 290,0 297,0 298,0				
18,0 29 20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	90,0 93,0 92,0 75,0 55,0 35,0 16,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	290,0 297,0 299,0 284,0 267,0 250,0 233,0 220,0 207,0 193,0 171,0 154,0	133,0 117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	186,0 165,0 148,0 133,0 121,0 110,0 101,0 93,0	239,0 213,0 192,0 174,0 159,0 145,0	285,0 262,0 236,0 214,0 196,0 180,0	290,0 280,0 270,0 252,0 233,0	290,0 295,0 295,0 278,0	290,0 297,0 298,0 284,0	290,0 297,0 298,0				
20,0 29 22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	93,0 92,0 75,0 55,0 35,0 16,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	297,0 299,0 284,0 267,0 250,0 233,0 220,0 207,0 193,0 171,0 154,0	117,0 104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	165,0 148,0 133,0 121,0 110,0 101,0 93,0	213,0 192,0 174,0 159,0 145,0 134,0	262,0 236,0 214,0 196,0 180,0	280,0 270,0 252,0 233,0	295,0 295,0 278,0	297,0 298,0 284,0	297,0 298,0				
22,0 29 24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	92,0 75,0 55,0 35,0 16,0 03,0 90,0 78,0 65,0 40,0 24,0 13,0 02,0	299,0 284,0 267,0 250,0 233,0 220,0 207,0 193,0 180,0 171,0 154,0	104,0 93,0 83,0 75,0 68,0 62,0 57,0 51,0	148,0 133,0 121,0 110,0 101,0 93,0	192,0 174,0 159,0 145,0 134,0	236,0 214,0 196,0 180,0	270,0 252,0 233,0	295,0 278,0	298,0 284,0	298,0				
24,0 27 26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	75,0 55,0 35,0 16,0 03,0 90,0 78,0 65,0 40,0 24,0 13,0 02,0	284,0 267,0 250,0 233,0 220,0 207,0 193,0 180,0 171,0	93,0 83,0 75,0 68,0 62,0 57,0 51,0 47,0	133,0 121,0 110,0 101,0 93,0	174,0 159,0 145,0 134,0	214,0 196,0 180,0	252,0 233,0	278,0	284,0					
26,0 25 28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	55,0 35,0 16,0 03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	267,0 250,0 233,0 220,0 207,0 193,0 180,0 171,0 154,0	83,0 75,0 68,0 62,0 57,0 51,0 47,0	121,0 110,0 101,0 93,0	159,0 145,0 134,0	196,0 180,0	233,0			284,0				
28,0 23 30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	35,0 16,0 03,0 90,0 78,0 65,0 40,0 24,0 13,0 02,0	250,0 233,0 220,0 207,0 193,0 180,0 171,0 154,0	75,0 68,0 62,0 57,0 51,0 47,0	110,0 101,0 93,0	145,0 134,0	180,0		258,0						
30,0 21 32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	16,0 03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	233,0 220,0 207,0 193,0 180,0 171,0 154,0	68,0 62,0 57,0 51,0 47,0	101,0 93,0	134,0		214,0		269,0	279,0				
32,0 20 34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	03,0 90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	220,0 207,0 193,0 180,0 171,0	62,0 57,0 51,0 47,0	93,0				238,0	254,0	269,0				
34,0 19 36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	90,0 78,0 65,0 56,0 40,0 24,0 13,0 02,0	207,0 193,0 180,0 171,0 154,0	57,0 51,0 47,0			167,0	195,0	217,0	239,0	260,0				
36,0 17 38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	78,0 65,0 56,0 40,0 24,0 13,0 02,0	193,0 180,0 171,0 154,0	51,0 47,0	85.0		154,0	182,0		226,0	245,0				
38,0 16 40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8	65,0 56,0 40,0 24,0 13,0 02,0	180,0 171,0 154,0	47,0		113,0	142,0	170,0	192,0	212,0	231,0				
40,0 15 44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	56,0 40,0 24,0 13,0 02,0	171,0 154,0		78,0	104,0	131,0	157,0	179,0	199,0	217,0		+		
44,0 14 48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	40,0 24,0 13,0 02,0	154,0	420	72,0	97,0	122,0	146,0	167,0	185,0	202,0				
48,0 12 52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	24,0 13,0 02,0		43,0 36,0	66,0 57,0	90,0 78,0	113,0 99,0	137,0 120,0	158,0	176,0 158,0	192,0 173,0				
52,0 11 56,0 10 60,0 9 64,0 8 68,0 7	13,0 02,0	137.01	30,0	49,5	69,0	99,0 88,0	120,0	141,0 125,0	141,0	155,0				
56,0 10 60,0 9 64,0 8 68,0 7	02,0	126,0	25,1	43,0	61,0	78,0	96,0	114,0	129,0	142,0				
60,0 9 64,0 8 68,0 7		114,0	20,9	38,0	54,0	70,0	87,0	103,0	117,0	130,0				
64,0 8 68,0 7		104,0	17,4	33,5	48,5	64,0	79,0	94,0	107,0	118,0				
<b>68,0</b> 7	85,0	96,0	14,5	29,4	44,0	58,0	72,0	86,0	99,0	107,0				
	78,0	88,0	12,0	26,0	39,5	53,0	66,0	79,0	90,0	94,0				
15,0	67,0	72,0	10,0	23,2	36,5	49,0	58,0	64,0	68,0	68,0				
	,-	,-	- , ,	- ,		-,-	, -	- ,-	, -	,-				
* n * 1	19	19	15	19	19	19	19	19	19	19		1		
		45.0	40.0	10.0	40.0	40.0	40.0	40.0	40.0	10.0		1		
		15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		+		
<b>zz</b> 300	0.00	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0		+		
-														
<b>-</b> 40														
<b>m</b>	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
											_			



074548										**	* 221				22.00
	1		l i n	n ><	t	CO	DE	> 54	431	<	V18	31 3	100	.x(x	)
	m	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0
	2,0	196,0	251,0	269,0	269,0	269,0	269,0	269,0	269,0	199,0	262,0	268,0	268,0	268,0	268,0
	4,0	166,0	214,0	263,0	270,0	270,0	270,0	270,0	270,0	169,0	224,0	270,0	270,0	270,0	270,0
	6,0	143,0	186,0	229,0	262,0	272,0	272,0	272,0	272,0	145,0	194,0	243,0	268,0	270,0	270,0
	8,0	124,0	163,0	201,0	240,0	274,0	274,0	274,0	274,0	127,0	171,0	214,0	258,0	272,0	272,0
	0,0	110,0	145,0	179,0	214,0	249,0	260,0	265,0	265,0	112,0	151,0	191,0	231,0	259,0	264,0
	2,0	97,0	129,0	161,0	193,0	225,0	246,0	257,0	269,0	99,0	136,0	172,0	208,0	242,0	256,0
	4,0	87,0 78,0	116,0 106,0	146,0 133,0	175,0 160,0	205,0 188,0	232,0 215,0	249,0 233,0	266,0 249,0	89,0	122,0 111,0	156,0 142,0	189,0 173,0	223,0 204,0	248,0 232,0
	6,0 8,0	71,0	96,0	122,0	147,0	173,0	198,0	217,0	233,0	80,0 72,0	101,0	130,0	159,0	188,0	216,0
	0,0	64,0	88,0	112,0	136,0	160,0	183,0	201,0	216,0	65,0	93,0	120,0	147,0	174,0	199,0
	2,0	58,0	81,0	103,0	126,0	148,0	168,0	185,0	199,0	59,0	85,0	111,0	136,0	162,0	183,0
	4,0	53,0	74,0	95,0	117,0	138,0	157,0	174,0	188,0	54,0	78,0	103,0	127,0	151,0	172,0
	6,0	48,5	68,0	89,0	109,0	129,0	147,0	163,0	177,0	49,5	72,0	95,0	118,0	141,0	161,0
	8,0	44,0	63,0	82,0	102,0	121,0	137,0	153,0	166,0	45,5	67,0	89,0	111,0	132,0	151,0
	0,0	40,5	59,0	77,0	95,0	113,0	128,0	143,0	156,0	41,5	62,0	83,0	103,0	123,0	140,0
	4,0	34,0	51,0	67,0	84,0	99,0	113,0	127,0	139,0	35,0	53,0	72,0	90,0	108,0	124,0
	8,0	28,5	43,5	59,0	74,0	88,0	101,0	113,0	126,0	29,3	46,0	63,0	79,0	96,0	111,0
	2,0	23,7	38,0	52,0	65,0	77,0	89,0	100,0	112,0	24,3	40,0	55,0	71,0	85,0	99,0
	6,0	19,6	33,0	45,5	58,0	70,0	81,0	92,0	103,0	20,2	35,0	49,0	63,0	77,0	90,0
	0,0	16,1	28,6	40,5	52,0	63,0	73,0	83,0	93,0	16,7	30,5	44,0	57,0	70,0	81,0
	4,0	13,1	24,8	36,5	47,0	56,0	66,0	75,0	85,0	13,6	26,6	39,5	51,0	63,0	74,0
	8,0	10,6	21,5	32,5	42,5	52,0	60,0	69,0	78,0	11,1	23,2	35,5	47,0	58,0	68,0
	2,0	8,4	18,7	28,9	38,0	46,5	55,0	63,0	72,0	8,9	20,3	32,0	42,5	52,0	62,0
	6,0	6,6	16,3	26,0	34,5	43,0	51,0	59,0	67,0	7,1	17,9	28,7	39,0	48,0	57,0
* n *		12	16	17	17	1Ω	1Ω	1Ω	10	12	17	17	17	17	17
* n *		12	16	1/	1/	18	18	18	18	12	17	1/	1/	1/	1/
уу	$\dashv$	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz		0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
<b>0-40</b> m	/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
			LDB			15	50	14	1,0 x						



074548									**	* 221				22.00
	MM	]   r	n ><	t	CO	DE	> 54	431	<	V18	31	3100	.x(x	)
m	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0				
12,0	268,0	268,0	204,0	268,0	268,0	268,0	268,0	268,0	268,0	268,0				
14,0		270,0	173,0	238,0	268,0	268,0	268,0	268,0	268,0	268,0				
16,0			149,0	207,0	260,0	269,0	269,0	269,0	269,0	269,0				
18,0 20,0		272,0 264,0	130,0 115,0	182,0 162,0	234,0	270,0 255,0	270,0 262,0	270,0 270,0	270,0 271,0	270,0 271,0				
20,0			102,0		188,0	231,0	255,0	270,0		271,0				
24,0		273,0	91,0	131,0	171,0	211,0	246,0	271,0	272,0	272,0				
26,0		259,0	82,0	119,0	156,0	193,0	230,0	254,0	260,0	265,0				
28,0		245,0	74,0	109,0	143,0	178,0	212,0	237,0	247,0	257,0				
30,0			67,0	100,0	132,0	164,0	196,0	220,0	235,0	249,0				
32,0			61,0	92,0	122,0	152,0	180,0	203,0		241,0				
34,0			56,0	85,0	113,0	142,0	169,0	191,0		229,0				
36,0		193,0	51,0	78,0	105,0	131,0	158,0	180,0	199,0	216,0				
38,0 40,0		182,0 171,0	47,0 43,0	72,0 67,0	97,0 90,0	122,0 114,0	147,0 137,0	169,0 158,0	187,0 175,0	204,0 192,0				
44,0			36,0	57,0	78,0	100,0	121,0	141,0		173,0				
48,0		138,0	30,5	49,5	69,0	88,0	107,0	127,0	142,0	157,0				
52,0			25,3	43,5	61,0	79,0	96,0	113,0		141,0				
56,0		114,0	21,1	38,0	54,0	71,0	87,0	103,0	117,0	130,0				
60,0		104,0	17,5	33,5	48,5	64,0	79,0	94,0	108,0	119,0				
64,0		95,0	14,4	29,4	44,0	58,0	72,0	85,0	98,0	108,0				
68,0		88,0	11,8	25,9	39,5	53,0	66,0	79,0		96,0				
72,0		81,0	9,6	22,8	36,0	48,5	60,0	72,0	84,0	84,0				
76,0	66,0	75,0	7,7	20,2	32,5	44,5	56,0	67,0	67,0	67,0				
4 4	47	47	40	47	47	47	47	47	47	47				
* n *	17	17	13	17	17	17	17	17	17	17				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
ZZ	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	000.0	000.0	0.0	00.0					000.0	000.0				
0-40														
M		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
	_				حر		14	1,0 x	Was a				I	
	S	LDB				<b>→</b>	<b>.</b>	,- A					II	

78m



074548	1									**	* 221				22.00
, A	>		l 1 n	n ><	t	CO	DE	> 54	432	<	V18	31 3	200	.x(x	()
	m .	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0
1 -	12,0	187,0	241,0	253,0	253,0	253,0	253,0	253,0	253,0			252,0			252,0
	14,0	159,0	206,0	253,0	254,0	254,0	254,0	254,0			216,0	254,0			254,0
	16,0	137,0	179,0	221,0	249,0	254,0	254,0	254,0				235,0	252,0		254,0
	18,0	120,0	157,0	195,0	233,0	255,0	256,0					208,0			255,0
	20,0	105,0	140,0	174,0	208,0	242,0	253,0	253,0	253,0			186,0			252,0
	22,0	94,0	125,0	156,0	188,0										244,0
	24,0	84,0	113,0	142,0	170,0	199,0	225,0					151,0			235,0
	26,0	75,0	102,0	129,0	156,0	183,0									226,0
	28,0	68,0	93,0	118,0	143,0	168,0	193,0	213,0	228,0			126,0	155,0	184,0	211,0
	30,0	61,0	85,0	108,0	132,0	155,0	179,0			62,0	89,0	116,0			197,0
	32,0	55,0	78,0	100,0	122,0	144,0	166,0	185,0				107,0			182,0
	34,0	50,0	71,0	92,0	113,0	134,0		171,0							
	36,0	46,0	66,0	86,0	105,0	125,0	144,0					92,0			157,0
	38,0	42,0	61,0	80,0	98,0	117,0	135,0					86,0			148,0
	40,0	38,0	56,0	74,0	92,0	110,0	127,0	142,0				80,0			139,0
	44,0	31,5	48,0	65,0	81,0	96,0	110,0					70,0			121,0
	48,0	26,4	41,5	57,0	72,0	86,0	99,0					62,0			109,0
	52,0	21,9	36,0	50,0	64,0	77,0	88,0					54,0			98,0
	56,0	18,1	31,0	44,5	57,0	68,0	78,0					48,0			87,0
	60,0	14,7	27,1	39,5	51,0	61,0	72,0					42,5			80,0
	64,0	11,7	23,4	35,0	45,5	55,0	65,0					38,0			72,0
	68,0	9,1	20,0	31,0	40,5	49,5	58,0					34,0			65,0
	72,0	6,9	17,2	27,4	36,5	45,0	54,0					30,5			60,0
	76,0	5,0	14,7	24,4	33,0	41,0	49,0				1 1				55,0
	80,0	0,0	12,6	21,7	29,6	37,0	45,0				14,0	24,3			51,0
	84,0		10,9	19,6	27,4	34,5	42,0				12,3	22,0			43,5
	0,0		10,0	10,0		07,5	72,0	40,0	45,5	<del> </del>	12,0	22,0	01,0	00,0	70,0
						'	į '	'	'	'	'	1	'	'	
	$\overline{}$				$\overline{}$	<del></del>	<del></del>	<del></del>	$\vdash$	<del></del> '	$\vdash$	<del></del>	<del> </del>	<del></del>	
						'	į '	'	'	'	'	1	'	'	
	-				$\overline{}$	<del></del>	$\square$	<del></del>	$\vdash$	<del> </del> '	+	<del></del>	<del> </del>		
						'	1 1	'	1 '	'	'	1	'	'	
	$\rightarrow$					$\vdash$	$\vdash$	<del></del>	$\vdash$	<del> </del> '	<del> </del>	<del></del>	<del>                                     </del>	+	
	1	.				'	i '	'	'	'	'	1	'	'	
* n *	$\rightarrow$	10	15	16	16	16	16	16	16	12	16	16	16	16	16
* n *	$\rightarrow$	12	15	16	16	16	16	16	16	12	16	16	16	16	16
1	. —	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
уу		0.0		100.0	150.0	200.0	250.0	300.0	350.0		50.0	100.0	150.0	200.0	
ZZ	-	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
					<sub> </sub>	<del></del>	$\vdash$	<del></del>	<del></del>	<del></del> '	<del> </del> '	<del></del>	<del>                                     </del>	<b></b>	
	$\rightarrow$					<del></del>	$\vdash$	<del></del>	<del></del>	<del> </del> '	<u> </u> '	<del></del>	<del> </del>	<b></b>	
					<sub>i</sub> 1		1 1	'	1 '	'	'	1		'	
	-	-		<b>—</b>	<del></del>	<b></b>	<b></b>	<del></del>	<del></del>	<del> </del> '	<del> </del>	<del></del>	<del> </del>	<b></b>	
							1	'	1 '	'	'	1		'	
						₩	<del></del>	<del>                                     </del>	<del></del>	<del> </del> '	<u> </u>	—	ļ	<b></b> _	
					<sub>i</sub> 1		1 1	'	1 '	'	'	1		'	
A -	$\longrightarrow$				<b></b>	<b></b>	<b></b>	<del>                                     </del>	<b></b> '	<del> </del> '	<u> </u> '	ــــــ	<u> </u>	ļ!	
o <b>_∤o</b>	1	.				'	i '	'	'	'	'	1	'	'	
ı m	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
<u> </u>	113						<del></del>			<del>                                     </del>	<del>                                     </del>		<del>                                     </del>	-	
													<u> </u>		<u> </u>
_	<u> </u>													1	
				İ		ء	ر I'	12	4.0 x	(V)			I		



074548	}									**	* 221				22.00
	<b>&gt;</b>		l i r	n ><	t	CO	DE	> 54	432	<	V18	31	3200	.x(x	)
	m	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0				
	12,0	252,0	252,0	196,0	251,0	251,0	251,0	251,0	251,0	251,0	251,0				
	14,0	254,0	254,0	166,0	230,0	252,0	252,0	252,0		252,0	252,0				
	16,0	254,0	254,0	144,0	200,0	247,0	252,0	252,0	252,0	252,0	252,0				
	18,0 20,0	255,0 252,0	255,0 252,0	125,0 111,0	176,0 157,0	227,0 203,0	253,0 249,0	253,0 250,0	253,0 250,0	253,0 250,0	253,0 250,0				
	22,0	251,0	254,0	98,0	141,0	183,0	225,0	241,0	252,0	254,0	254,0				
	24,0	249,0	253,0	88,0	127,0	166,0	205,0	233,0	251,0	254,0	254,0				
	26,0	244,0	250,0	79,0	115,0	152,0	188,0	224,0		251,0	251,0				
	28,0	229,0	237,0	71,0	105,0	139,0	173,0	207,0	232,0	240,0	245,0				
	30,0	215,0	225,0	65,0	96,0	128,0	160,0	192,0		228,0	237,0				
	32,0	200,0	213,0	59,0	89,0	119,0	148,0	178,0	202,0	217,0	230,0				
	34,0 36,0	186,0 175,0	200,0 190,0	53,0 48,5	82,0 75,0	110,0 102,0	138,0 129,0	166,0 155,0	187,0 176,0	206,0 195,0	222,0 212,0				
	36,0 38,0	165,0	180,0	48,5 44,5	75,0 70,0	95,0	129,0	146,0	166,0	185,0	202,0				
	40,0	156,0	170,0	40,5	65,0	89,0	113,0	136,0	157,0	175,0	191,0				
	44,0	137,0	150,0	34,0	56,0	77,0	99,0	119,0	138,0	154,0	169,0				
	48,0	124,0	137,0	28,5	48,5	68,0	87,0	106,0		141,0	155,0				
	52,0	111,0	124,0	23,9	42,0	60,0	77,0	95,0	112,0	127,0	141,0				
	56,0	99,0	112,0	19,8	37,0	53,0	69,0	86,0	100,0	115,0	127,0				
	60,0	91,0	103,0	16,1	32,0	47,5	63,0	78,0	92,0	106,0	117,0				
	64,0	83,0	94,0	13,0	28,0	42,5	57,0	71,0	84,0	97,0	106,0				
	68,0 72,0	76,0 70,0	86,0 80,0	10,4 8,1	24,4 21,3	38,5 34,5	51,0 47,0	64,0 59,0	76,0 71,0	88,0 80,0	96,0 84,0				
	76,0	64,0	74,0	6,1	18,6	31,0	43,0	54,0	65,0	71,0	72,0				
	80,0	60,0	65,0	0,1	16,2	28,1	39,5	50,0	59,0	61,0	61,0				
	84,0	47,5	48,0		14,4	25,6	35,5	40,0	43,5	43,5	43,5				
							-								
* n *		16	16	12	16	16	16	16	16	16	16				
уу	<i>'</i>	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
ZZ		300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	_							L							
o <b>-∦o</b>															
W,	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
•															
	$\overline{}$											_			
i						ے	. 1	1/	10	1					
		S	LDB				<b>~</b> [	l — '	., · X	WA.				l	



74548									**	* 221				22.00
		l I	n ><	t	CO	DE	> 54	433	<	V18	31 3	300	.x(x	()
m m	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0
14,0	153,0	199,0	234,0	234,0	234,0	234,0	234,0	234,0	156,0	208,0	232,0	232,0	232,0	232,0
16,0	132,0	173,0	214,0	233,0	233,0	233,0	233,0	233,0	135,0	181,0	228,0	232,0	232,0	232,0
18,0	115,0	152,0	189,0	225,0	234,0	234,0	234,0	234,0	118,0	160,0	202,0	230,0	233,0	233,0
20,0	102,0	135,0	169,0	202,0	235,0	235,0	235,0	235,0	104,0	142,0	180,0	218,0	233,0	233,0
22,0	90,0	121,0	152,0	183,0	213,0	226,0	229,0	229,0	92,0	127,0	162,0	197,0	224,0	228,0
24,0	80,0	109,0	137,0	166,0	194,0	215,0	222,0		82,0	115,0	147,0	180,0	211,0	221,0
26,0	72,0	99,0	125,0	152,0	178,0	204,0 189,0	216,0	216,0	74,0 66,0	104,0	134,0	164,0	194,0	215,0
28,0 30,0	65,0 59,0	90,0 82,0	114,0 105,0	139,0 128,0	164,0 151,0	175,0	207,0 194,0	207,0 197,0	60,0	95,0 86,0	123,0 113,0	151,0 139,0	179,0 166,0	205,0 192,0
32,0	53,0	75,0	97,0	119,0	140,0	162,0	182,0	188,0	54,0	79,0	104,0	129,0	154,0	179,0
34,0	48,0	69,0	89,0	110,0	131,0	151,0	170,0	179,0	49,0	73,0	96,0	120,0	144,0	167,
36,0	43,5	63,0	83,0	102,0	122,0	141,0	158,0	170,0	44,5	67,0	89,0	112,0	134,0	155,0
38,0	39,5	58,0	77,0	96,0	114,0	132,0	148,0	162,0	40,5	62,0	83,0	104,0	126,0	145,0
40,0	36,0	54,0	72,0	89,0	107,0	125,0	140,0	153,0	37,0	57,0	78,0	98,0	118,0	137,
44,0	29,7	46,0	62,0	79,0	95,0	110,0	124,0	137,0	30,5	49,0	68,0	86,0	105,0	121,0
48,0	24,4	39,5	54,0	69,0	84,0	96,0	108,0	121,0	25,3	42,5	59,0	77,0	92,0	107,0
52,0	20,0	34,0	48,0	62,0	75,0	87,0	98,0	110,0	20,7	36,5	52,0	68,0	83,0	96,0
56,0	16,1	29,1	42,0	55,0	67,0	78,0	88,0	99,0	16,9	31,5	46,5	61,0	74,0	86,0
60,0	12,8	25,0	37,0	49,0	59,0	69,0	79,0	89,0	13,5	27,4	41,5	54,0	66,0	77,0
64,0	10,0	21,5	33,0	44,0	54,0	63,0	73,0	82,0	10,6	23,7	37,0	49,0	60,0	71,0
68,0	7,5	18,3	29,2	39,5	48,0	57,0	66,0	75,0	8,1	20,4	32,5	44,0	54,0	64,0
72,0	5,3	15,6	25,9	34,5	43,0	51,0	60,0	68,0	5,9	17,4	28,8	39,0	48,5	58,0
76,0		13,1	22,8	31,0	39,0	47,0	55,0	63,0		14,7	25,5	35,0	44,5	54,0
80,0		10,9	20,1	27,8	35,5	43,0	51,0	58,0		12,4	22,6	31,5	40,5	49,5
84,0		8,9	17,6	24,6	32,0	39,0	46,5	53,0		10,3	19,9	28,3	37,0	45,0
88,0		7,3	15,6	22,1	29,2	36,0	42,0	48,0		8,6	17,9	25,8	33,5	41,0
* n *	9	12	15	15	15	15	15	15	10	13	15	15	15	15
VV	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
уу zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
	0.0	50.0	100.0	130.0	200.0	250.0	300.0	330.0	0.0	30.0	100.0	130.0	200.0	200.0
<b>10</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0



074548									**	* 221				22.00
		] i n	n ><	t	CO	DE	> 54	433	<	V18	31	3300	.x(x	)
m m	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0				
14,0	232,0	232,0	160,0	222,0	230,0	230,0	230,0	230,0	230,0	230,0				
16,0	232,0	232,0	138,0	194,0	229,0	230,0	230,0		230,0	230,0				
18,0	233,0	233,0	121,0	171,0	221,0	231,0	231,0	231,0	231,0	231,0				
20,0	233,0	233,0	107,0	152,0	197,0	232,0	232,0		232,0	232,0				
22,0 24,0	228,0 223,0	228,0 223,0	95,0 85,0	136,0 123,0	178,0 162,0	220,0 200,0	226,0 219,0	226,0 223,0	226,0 223,0	226,0 223,0				
26,0	217,0	217,0	76,0	112,0	148,0	183,0	213,0	219,0	219,0	219,0				
28,0	210,0	210,0	69,0	102,0	135,0	169,0	202,0		214,0	214,0				
30,0	200,0	204,0	62,0	93,0	125,0	156,0	187,0	202,0	207,0	207,0				
32,0	190,0	197,0	56,0	86,0	115,0	145,0	174,0			207,0				
34,0	180,0	191,0	51,0	79,0	107,0	135,0	163,0		195,0	204,0				
36,0	170,0	184,0	46,5	73,0	99,0	126,0	152,0		189,0	200,0				
38,0	161,0	176,0	42,0	67,0	93,0	118,0	143,0	163,0	181,0	193,0				
40,0	153,0	167,0 150,0	38,5	63,0	87,0	111,0	135,0	155,0	172,0	185,0				
44,0 48,0	136,0 121,0	133,0	32,0 26,5	54,0 47,0	76,0 67,0	98,0 86,0	119,0 104,0	138,0 122,0	154,0 137,0	168,0 152,0				
52,0	110,0	122,0	21,9	40,5	59,0	76,0	94,0	111,0	126,0	139,0				
56,0	99,0	111,0	17,9	35,5	52,0	68,0	85,0	100,0	114,0	126,0				
60,0	89,0	100,0	14,5	31,0	46,5	61,0	76,0	90,0	103,0	114,0				
64,0	82,0	93,0	11,6	26,7	41,5	55,0	69,0	82,0	95,0	103,0				
68,0	75,0	85,0	9,0	23,0	37,0	50,0	63,0	75,0	88,0	92,0				
72,0	68,0	77,0	6,6	19,8	33,0	45,0	57,0	68,0	80,0	81,0				
76,0	63,0	70,0		17,0	29,5	41,5	52,0	63,0	71,0	71,0				
80,0	58,0	63,0		14,6	26,4	37,5	48,0	58,0	62,0	62,0				
84,0	53,0 46,5	56,0 46,5		12,4 10,6	23,6 21,3	34,0 30,5	44,0	53,0 43,0	53,0 43,0	53,0 43,0				
88,0	40,5	46,5		10,6	21,3	30,3	39,5	43,0	43,0	43,0				
+ +	4.5	45	40	4.4	4.5	4.5	4.5	4.5	45	45				
* n *	15	15	10	14	15	15	15	15	15	15				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>_{t0</b>														
l M	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>Ш</b> m/s	3,0	3,0	3,0	3,0	9,0	9,0	3,0	3,0	3,0	9,0				
									<b>(6)</b>	<b>A</b>				
					_		<b>.</b>	10	16/	KIV)	1			



074548									**	* 221				22.00
		l i n	n ><	t	CO	DE	> 54	434	<	V18	31 3	400	.x(x	)
m m	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0
14,0	147,0	192,0	215,0	215,0	215,0	215,0	215,0	215,0	150,0	201,0	213,0	213,0	213,0	213,0
16,0	127,0	167,0	207,0	215,0	215,0	215,0	215,0	215,0	130,0	175,0	214,0	214,0	214,0	214,0
18,0	111,0	147,0	183,0	210,0	212,0	212,0	212,0	212,0	113,0	154,0	195,0	212,0	212,0	212,0
20,0 22,0	98,0 87,0	131,0 117,0	164,0 147,0	197,0 177,0	208,0	208,0 203,0	208,0	208,0	100,0 88,0	137,0 123,0	175,0 157,0	210,0 192,0	210,0 205,0	210,0 205,0
24,0	77,0	105,0	133,0	161,0	189,0	196,0	197,0	197,0	79,0	111,0	143,0	175,0	197,0	199,0
26,0	69,0	95,0	121,0	147,0	173,0	190,0	191,0	191,0	71,0	100,0	130,0	160,0	188,0	193,0
28,0	62,0	86,0	111,0	135,0	160,0	184,0	184,0	184,0	64,0	91,0	119,0	147,0	175,0	188,0
30,0	56,0	79,0	102,0	125,0	148,0	170,0	177,0	178,0	57,0	83,0	109,0	136,0	162,0	180,0
32,0	50,0	72,0	94,0	115,0	137,0	158,0	168,0	172,0	52,0	76,0	101,0	126,0	150,0	170,0
34,0	45,5	66,0	86,0	107,0	127,0	148,0	160,0	167,0	47,0	70,0	93,0	117,0	140,0	161,0
36,0 38,0	41,0 37,5	61,0 56,0	80,0 74,0	99,0 93,0	119,0 111,0	138,0 129,0	152,0 144,0	161,0 156,0	42,5 38,5	64,0 59,0	87,0 80,0	109,0 101,0	131,0 122,0	151,0 142,0
40,0	33,5	51,0	69,0	86,0	104,0	129,0	136,0	149,0	34,5	55,0	75,0	95,0	115,0	134,0
44,0	27,5	43,5	60,0	76,0	92,0	108,0	122,0	135,0	28,4	47,0	65,0	84,0	102,0	119,0
48,0	22,3	37,0	52,0	67,0	82,0	95,0	108,0	120,0	23,2	40,0	57,0	74,0	91,0	105,0
52,0	17,9	31,5	45,5	59,0	73,0	84,0	96,0	107,0	18,7	34,5	50,0	66,0	80,0	94,0
56,0	14,1	27,0	40,0	53,0	65,0	76,0	87,0	98,0	14,8	29,5	44,0	59,0	73,0	85,0
60,0	10,8	22,9	35,0	47,0	58,0	68,0	78,0	88,0	11,5	25,2	39,0	53,0	65,0	76,0
64,0 68,0	7,9 5,4	19,3 16,2	30,5 26,9	42,0 37,5	51,0 46,5	61,0 55,0	70,0 64,0	79,0 73,0	8,6 6,0	21,5 18,3	34,5 30,5	46,5 42,0	57,0 52,0	68,0 63,0
72,0	5,4	13,4	23,6	33,5	41,5	50,0	59,0	67,0	0,0	15,4	27,0	37,5	47,5	57,0
76,0		11,0	20,5	29,0	37,0	45,0	53,0	61,0		12,9	23,7	33,0	42,0	51,0
80,0		8,8	18,1	25,7	33,5	41,0	48,5	56,0		10,6	21,0	29,7	38,5	47,0
84,0		6,9	15,8	22,7	30,0	37,5	44,5	52,0		8,6	18,3	26,5	35,0	43,5
88,0		5,3	13,7	19,7	26,8	34,0	40,5	47,5		6,7	16,0	23,4	31,5	39,5
92,0 96,0			11,7 10,1	17,8 16,4	24,2 22,2	31,0 26,5	37,5 29,0	42,0 30,5		5,1	13,9 12,2	20,8 19,3	28,7 24,1	36,5 26,9
90,0			10,1	10,4	22,2	20,3	29,0	30,5			12,2	19,3	24,1	20,9
* *	0	10	1.1	1.4	1.1	1.4	1.4	4.4		40	10	10	40	40
* n *	9	12	14	14	14	14	14	14	9	13	13	13	13	13
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0		250.0
<del>-  </del>														
<b>o_∦o</b>														
<b> </b>	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
						_								
			l		ı,	. 1	1/		<b>(4)</b>		1			



74548									**	* 221				22.0
		l r	n ><	t	CO	DE	> 54	434	<	V18	1 34	00	.x(x	)
m	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0					_
14,0	213,0	213,0	154,0	212,0	212,0	212,0	212,0	212,0	212,0					
16,0	214,0	214,0	133,0	187,0	212,0	212,0	212,0	212,0	212,0					
18,0	212,0	212,0	117,0	165,0	207,0	210,0	210,0	210,0	210,0					
20,0	210,0	210,0	103,0	147,0	192,0	209,0	209,0	209,0	209,0					
22,0	205,0	205,0	91,0	132,0	173,0	206,0	206,0	206,0	206,0					
24,0	199,0	199,0	81,0	119,0	157,0	195,0	200,0							
26,0	193,0	193,0	73,0	108,0	143,0	179,0	195,0	195,0	195,0					
28,0	188,0	188,0	66,0	99,0	132,0	164,0	190,0	190,0	190,0					
30,0	181,0	181,0	59,0	90,0	121,0	152,0	182,0	184,0	184,0					
32,0	175,0	175,0	54,0	83,0	112,0	141,0	170,0	177,0	183,0					
34,0	169,0	176,0	48,5	76,0	104,0	131,0	159,0	171,0	180,0					
36,0	163,0	172,0	44,0	70,0	96,0	123,0	149,0	165,0	177,0					
38,0	157,0	169,0	40,0	65,0	90,0	115,0	140,0	159,0	174,0					
40,0	150,0	163,0	36,5	60,0	84,0	108,0	131,0	152,0	168,0					
44,0	135,0	148,0	29,8	52,0	73,0	95,0	117,0	136,0	152,0					
48,0	120,0	133,0	24,4	44,5	65,0	85,0	104,0	121,0	136,0					
52,0	107,0	120,0	19,8	38,5	57,0	75,0	92,0	108,0	123,0					
56,0	98,0	109,0	15,9	33,5	51,0	67,0	83,0	98,0	113,0					
60,0	88,0	99,0	12,5	28,8	45,0	60,0	75,0	89,0	102,0					
64,0	79,0	90,0	9,5	24,9	40,0	54,0	67,0	80,0	92,0					
68,0	73,0	83,0	6,9	21,4	35,5	49,0	61,0	73,0	83,0					
72,0	67,0	76,0	0,0	18,3	31,5	44,0	56,0	67,0	74,0					
76,0	61,0	70,0		15,5	27,9	39,0	50,0	61,0	66,0					
80,0	56,0	62,0		12,9	24,7	35,5	46,0	56,0	59,0					
84,0	52,0	55,0		10,7	21,9	32,0	42,5	50,0	52,0					
88,0	47,0	47,5		8,7	19,1	28,7	38,5	45,0	45,0					
92,0	40,5	40,5		7,0	17,2	26,1	35,5	37,0	37,0					
96,0	28,0	28,0		5,6	15,4	20,7	24,2	24,2	24,2					
30,0	20,0	20,0		3,0	13,4	20,1	24,2	27,2	27,2					
* n *	13	13	10	13	13	13	13	13	13					
	15.0	45.0	10.0	10.0	10.0	10.0	40.0	40.0	40.0					
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0					
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0					
<b>40</b>														
l m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0					
- 11/5	-					•								
						<u> </u>	_							
					ء		1/	10 ~	W.					



074548									**	* 221				22.00
		l i n	n ><	t	CO	DE	> 54	435	<	V18	31 3	500	.x(x	)
m m	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0
14,0	143,0	186,0	186,0	186,0	186,0	186,0	186,0	186,0	146,0	187,0	187,0	187,0	187,0	187,0
16,0	124,0	163,0	182,0	182,0	182,0	182,0	182,0	182,0	126,0	171,0	183,0	183,0	183,0	183,0
18,0	108,0	144,0	177,0	177,0	177,0	177,0	177,0	177,0	110,0	151,0	179,0	179,0	179,0	179,0
20,0	95,0	128,0	160,0	170,0	170,0	170,0	170,0	170,0	97,0	134,0	171,0	172,0	172,0	172,0
22,0 24,0	85,0 75,0	114,0 103,0	144,0 131,0	164,0 157,0	164,0 157,0	164,0 157,0	164,0 157,0	164,0 157,0	86,0 77,0	120,0 109,0	154,0 140,0	167,0 161,0	167,0 161,0	167,0 161,0
26,0	68,0	93,0	119,0	145,0	150,0	150,0	150,0	150,0	69,0	98,0	128,0	154,0	154,0	154,0
28,0	61,0	85,0	109,0	133,0	143,0	143,0	143,0	143,0	62,0	90,0	117,0	144,0	148,0	148,0
30,0	55,0	77,0	100,0	122,0	136,0	136,0	136,0	136,0	56,0	82,0	108,0	133,0	142,0	142,0
32,0	49,5	71,0	92,0	113,0	130,0	132,0	132,0	132,0	51,0	75,0	99,0	123,0	136,0	139,0
34,0	44,5	65,0	85,0	105,0	123,0	128,0	131,0	131,0	45,5	69,0	92,0	115,0	131,0	136,0
36,0	40,0	59,0	79,0	98,0	117,0	124,0	130,0	130,0	41,5	63,0	85,0	107,0	125,0	133,0
38,0	36,5	55,0	73,0	91,0	109,0	121,0	128,0	128,0	37,5	58,0	79,0	100,0	119,0	131,0
40,0	33,0	50,0	68,0	85,0	103,0	117,0	126,0	126,0	34,0	54,0	74,0	93,0	113,0	128,0
44,0	26,8	42,5	59,0	75,0	91,0	107,0	118,0	118,0	27,7	46,0	64,0	82,0	100,0	118,0
48,0	21,6	36,5	51,0	66,0	81,0	95,0	106,0	108,0	22,5	39,5	56,0	73,0	90,0	106,0
52,0	17,3	31,0	44,5	58,0	72,0	84,0	95,0	98,0	18,0	33,5	49,0	65,0	80,0	93,0
56,0	13,5	26,3	39,0	52,0	64,0	75,0	86,0	90,0	14,2	28,8	43,5	58,0	72,0	84,0
60,0	10,2	22,2 18,6	34,0	46,0	58,0 51.0	68,0	78,0	83,0	10,9	24,5	38,0	52,0 46,5	65,0 58,0	76,0
64,0 68,0	7,4	15,5	29,9 26,2	41,0 36,5	51,0 45,5	61,0 54,0	70,0 63,0	76,0 70,0	8,0 5,4	20,9 17,6	33,5 29,8	40,5	51,0	69,0 62,0
72,0		12,8	22,9	32,5	41,5	49,5	58,0	63,0	3,4	14,7	26,3	37,0	47,0	57,0
76,0		10,3	19,9	28,9	37,0	45,0	53,0	57,0		12,2	23,1	33,0	42,5	52,0
80,0		8,1	17,3	25,1	33,0	40,5	48,0	51,0		9,9	20,2	29,1	38,0	46,5
84,0		6,2	15,0	22,2	29,4	36,5	43,5	45,0		7,9	17,7	25,9	34,5	42,0
88,0			12,9	19,8	26,5	33,5	39,5	40,5		6,1	15,7	23,2	31,5	38,0
92,0			11,1	17,5	23,6	30,5	35,0	35,5			13,6	20,4	28,1	34,0
96,0			9,6	15,5	21,0	27,5	30,5	30,5			11,7	18,2	25,4	29,1
100,0			8,1	14,0	18,4	23,3	23,8	23,8			10,1	16,1	21,4	22,3
* n *	9	12	12	12	12	12	12	12	9	12	12	12	12	12
	J	12	14	14	14	14	14	14		14	14	12	14	12
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0		250.0
0-10														
l m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
<b>W</b> 1175	•		•							•			•	•
									<b>A</b>	AD				



074548	3									**	** 221				22.00
6	<b>&gt;</b>		] i r	n ><	t	CO	DE	> 54	435	<	V18	31 3	3500	.x(x	<b>()</b>
	m	102,0	102,0	102,0	102,0	102,0	102,0	102,0							
	14,0	187,0	150,0	186,0	186,0	186,0	186,0	186,0							
	16,0	183,0	130,0	183,0	183,0	183,0		183,0							
	18,0	179,0	114,0	162,0	179,0	179,0	179,0	179,0							
	20,0	172,0	100,0	144,0	174,0	174,0		174,0							
	22,0	167,0	89,0	129,0	170,0	170,0	170,0	170,0							
	24,0 26,0	161,0 154,0	80,0 72,0	117,0 106,0	154,0 141,0	164,0 158,0	164,0 158,0	164,0 158,0			+ +				
	28,0	148,0	64,0	97,0	129,0	152,0		152,0							
	30,0	142,0	58,0	89,0	119,0	147,0	147,0	147,0							
	32,0	139,0	53,0	81,0	110,0	139,0		142,0							
	34,0	137,0	47,5	75,0	102,0	129,0	138,0	140,0							
	36,0	134,0	43,0	69,0	95,0	121,0									
	38,0	132,0	39,0	64,0	88,0	113,0		135,0							
	40,0	129,0	35,5	59,0	82,0	106,0									
	44,0	120,0	29,1	51,0	72,0	94,0	115,0	123,0							
	48,0	110,0	23,8	43,5	64,0	83,0	103,0	113,0							
	52,0	100,0	19,2	37,5	56,0	75,0	91,0	102,0							
	56,0 60,0	92,0 84,0	15,3 11,9	32,5 28,1	50,0 44,5	67,0 60,0	82,0 75,0	93,0 85,0							
	64,0	77,0	8,9	24,2	39,5	54,0	67,0	78,0							
	68,0	70,0	6,3	20,7	35,0	48,0	60,0	70,0							
	72,0	63,0	0,0	17,7	31,5	43,5	55,0	63,0							
	76,0	57,0		15,0	27,8	39,0	50,0	56,0							
	80,0	50,0		12,6	24,3	35,0		49,0							
	84,0	44,5		10,5	21,5	31,5	41,0	43,5							
	88,0	39,5		8,4	19,1	28,5	36,5	38,0							
	92,0	34,5		6,6	16,8	25,4		32,5							
	96,0 100,0	29,1		5,1	14,8	22,8 18,7	26,9 19,7	26,9							
	100,0	22,3			13,0	10,7	19,7	19,7							
* n *	k	12	9	12	12	12	12	12							
У		15.0	18.0	18.0	18.0	18.0	18.0	18.0			-				
ZZ	<u> </u>	300.0	0.0	50.0	100.0	150.0	200.0	250.0							
0-40															
Ĭ	ma/a	9,0	9,0	9,0	9,0	9,0	9,0	9,0							
	m/s	5,5	- 5,5	5,5		5,5	,,,	,,,			+ +		+		
		_				_			<u> </u>						
										SA.					
		_		I		• ·	<b>\</b>	<b>=</b> 14	1.U x	I VA				11	



074040		_								221				22.00
		n H	n ><	t	CO	DE	> 54	436	<	V18	31 3	600	.x(x	()
	m <b>108,0</b>	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0
16		149,0	149,0	149,0	149,0	149,0	122,0	150,0	150,0	150,0	150,0	126,0	152,0	152,0
18			143,0	143,0	143,0	143,0	107,0	146,0	146,0	146,0	146,0	111,0		148,0
20		124,0	136,0	136,0	136,0	136,0	95,0	131,0	139,0	139,0	139,0	98,0	141,0	142,0
22		112,0 101,0	129,0 123,0	129,0 123,0	129,0 123,0	129,0 123,0	84,0 75,0	118,0 106,0	133,0 126,0	133,0 126,0	133,0 126,0	87,0 78,0	126,0 114,0	136,0 130,0
26			116,0	116,0	116,0	116,0	67,0	96,0	120,0	120,0	120,0	70,0	104,0	125,0
28			106,0	109,0	109,0	109,0	61,0	88,0	113,0	113,0	113,0	63,0	95,0	119,0
30			98,0	103,0	103,0	103,0	55,0	80,0	105,0	106,0	106,0		87,0	114,0
32			90,0	96,0	97,0	97,0	49,0	73,0	97,0	100,0	104,0	51,0		108,0
34			83,0	93,0	95,0	95,0	44,5	67,0	90,0	98,0	102,0	46,0	73,0	
36			77,0	90,0	94,0	94,0	40,0	62,0	83,0	95,0	100,0	42,0	67,0	93,0
38			71,0	87,0	92,0	92,0	36,5	57,0	77,0	93,0	97,0	38,0	62,0	87,0
40		49,0 41,5	66,0 57,0	83,0 73,0	91,0 88,0	91,0 88,0	33,0 26,7	52,0 44,5	72,0 63,0	90,0 81,0	95,0 90,0	34,5 28,1	58,0 49,5	81,0 71,0
48			50,0	64,0	79,0	79,0	21,5	38,0	55,0	71,0	81,0	22,8	49,5	62,0
52			43,5	57,0	71,0	71,0	17,1	32,5	48,0	63,0	73,0	18,3	36,5	55,0
56			38,0	51,0	63,0	63,0	13,3	27,7	42,0	57,0	64,0	14,4	31,5	48,5
60			33,0	45,0	57,0	57,0	10,0	23,5	37,0	51,0	58,0	11,0	27,0	43,0
64			28,8	40,0	51,0	52,0	7,1	19,8	32,5	45,5	53,0	8,0	23,1	38,5
68		14,5	25,1	35,5	45,0	47,0		16,6	28,7	40,5	47,5	5,4	19,7	34,0
72 76		11,7 9,3	21,8 18,8	31,5 28,0	39,5 36,0	42,0 38,0		13,7 11,1	25,1 22,0	35,5 32,0	42,5 38,0		16,6 13,9	30,0
80		7,0	16,2	24,5	32,0	33,5		8,8	19,2	28,4	33,5		11,5	26,8 23,7
84		5,1	13,8	21,1	28,5	29,4		6,7	16,7	24,7	29,2		9,3	20,3
88		0,.	11,6	18,4	24,8	25,4		0,:	14,4	21,6	25,0		7,3	17,7
92	:,0		9,7	16,5	21,2	21,6			12,4	18,8	21,0		5,6	
96	,0		8,0	14,6	17,6	17,7			10,6	16,1	17,0			13,9
100	,0		6,6	12,5	13,9	13,9			9,0	13,1	13,1			11,7
104	·,0		5,3	9,8	10,0	10,0			7,5	9,1	9,1			7,4
* * *	7	0	0	0	0	0	0	0	0	0	0	0	0	0
* n *	7	9	9	9	9	9	8	9	9	9	9	8	9	9
yy _ zz _	13.0	13.0 50.0	13.0 100.0	13.0 150.0	13.0 200.0	13.0 250.0	15.0 0.0	15.0 50.0	15.0 100.0	15.0 150.0	15.0 200.0	18.0 0.0	18.0 50.0	18.0 100.0
_														
<b>0-40</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
		SLDB 08m			15 t	— 1	14 14 n	4,0 x	yy y	zz t				



074548									**	* 221				22.00
		l 1 n	n ><	t	CO	DE	> 54	136	<	V18	31 (	3600	.x(x	)
<del>- </del>	108,0													
16,0	152,0													
18,0	148,0													
20,0	142,0 136,0													
24,0														
26.0	125,0													
28,0	119,0													
30,0	114,0													
32,0	108,0													
34,0	106,0													
36,0	103,0													
38,0 40,0	101,0 99,0													
44,0														
48,0	82,0													
52,0	73,0													
56,0	66,0													
60,0	59,0													
64,0	53,0													
68,0 72,0	47,5 42,0													
72,0 76,0	37,5													
80,0	33,0													
84,0	28,4													
88,0	24,0													
92,0	19,9													
96,0	15,7													
100,0	11,7													
104,0	7,4													
* n *	9													
	18.0													
уу zz	150.0													
	100.0													
0-40														
	9,0													
<b>Ш</b> m/s	0,0													
									<u></u>					
	S	LDB				<u> </u>	14	,0 <sub>X</sub>	W.					
					15	0	14	.0						
	10	)8m				-	_		<b>—</b>	zz t				
					t		n		уу	m	<u> </u>			



074548	*** 221													22.00
		] i r	n ><	t	CO	DE	> 54	437	<	V18	31 3	700	.x(x	()
m m	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0
16,0	113,0	150,0	151,0	151,0	151,0	151,0	151,0	151,0	115,0	155,0	155,0	155,0	155,0	155,0
18,0	98,0	132,0	150,0	150,0	150,0	150,0	150,0	150,0	100,0	139,0	154,0	154,0	154,0	154,0
20,0 22,0	87,0 77,0	118,0 105,0	147,0 134,0	149,0 148,0	149,0 148,0	149,0 148,0	149,0 148,0	149,0 148,0	88,0 78,0	124,0 111,0	152,0 144,0	153,0 152,0	153,0 152,0	153,0 152,0
24,0	68,0	95,0	122,0	148,0	148,0	148,0	148,0	148,0	70,0	100,0	130,0	151,0	151,0	151,0
26,0	61,0	86,0	111,0	135,0	145,0	146,0	146,0	146,0	62,0	91,0	119,0	147,0	148,0	148,0
28,0	54,0	78,0	101,0	124,0	140,0	145,0	145,0	145,0	56,0	82,0	109,0	135,0	146,0	148,0
30,0	48,5	71,0	93,0	115,0	135,0	145,0	145,0		50,0	75,0	100,0	125,0	143,0	147,0
32,0	43,5	64,0	85,0	106,0	127,0	144,0	144,0	144,0	44,5	68,0	92,0	116,0	139,0	146,0
34,0	39,0	59,0	78,0 72,0	98,0 91,0	118,0	137,0 128,0	142,0 136,0	142,0	40,0 36,0	62,0 57,0	85,0 79,0	107,0 100,0	130,0 121,0	143,0 137,0
36,0 38,0	35,0 31,0	54,0 49,0	67,0	85,0	110,0 103,0	120,0	130,0	138,0 135,0	32,0	52,0	79,0	93,0	114,0	131,0
40,0	27,8	45,0	62,0	79,0	96,0	113,0	125,0	131,0	28,8	48,0	68,0	87,0	106,0	124,0
44,0	22,0	37,5	53,0	69,0	85,0	100,0	114,0	124,0	22,8	40,5	58,0	76,0	94,0	112,0
48,0	17,0	31,5	46,0	60,0	75,0	89,0	103,0	115,0	17,8	34,5	51,0	67,0	84,0	100,0
52,0	12,8	26,3	39,5	53,0	67,0	80,0	93,0	104,0	13,6	28,9	44,0	59,0	75,0	90,0
56,0	9,2	21,7	34,5	47,0	59,0	72,0	83,0	93,0	9,9	24,2	38,5	53,0	67,0	81,0
60,0	6,0	17,8	29,6	41,5	53,0	63,0	73,0	83,0	6,6	20,1	33,5	47,0	60,0	71,0
64,0 68,0		14,3 11,3	25,4 21,8	36,5 32,5	47,5 43,0	57,0 52,0	67,0 61,0	76,0 69,0		16,5 13,3	29,2 25,3	42,0 37,5	54,0 49,0	65,0 59,0
72,0		8,6	18,5	28,5	37,5	46,0	54,0	63,0		10,5	21,8	33,0	43,5	53,0
76,0		6,1	15,6	24,9	33,0	41,0	49,0	57,0		8,0	18,8	29,1	38,5	47,5
80,0		-,	13,0	22,1	29,5	37,5	45,0	52,0		5,7	16,0	25,9	35,0	43,5
84,0			10,7	19,2	26,0	33,5	41,0	48,0			13,5	22,6	31,0	39,5
88,0			8,5	16,4	22,5	29,7	36,5	43,5			11,3	19,4	27,3	35,5
92,0			6,6	14,1	19,6	26,4	33,0	39,5			9,3	16,8	24,1	32,0
96,0 100,0				12,3 10,6	17,7 15,8	23,8 21,3	30,0 27,3	36,5 33,5			7,5 5,9	15,0 13,1	21,8 19,4	29,1 26,2
104,0				8,9	13,9	18,7	24,4	30,5			3,9	11,3	17,0	23,3
108,0				7,6	12,3	17,0	22,1	28,0				9,9	15,4	21,0
112,0				6,5	11,1	15,1	18,3	22,2				8,2	11,9	15,4
* n *	7	9	9	9	9	9	9	9	7	10	10	10	10	10
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0		150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0		250.0
<b>0-40</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
						7		7		Δ.	Í	`	ır	`



074548									**	* 221				22.00
		n r	n ><	t	CO	DE	> 54	437	<	V18	31 3	3700	.x(x	()
m m	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0				
16,0	155,0	155,0	118,0	154,0	154,0	154,0	154,0		154,0	154,0				
18,0	154,0		103,0	149,0	153,0		153,0			153,0				
20,0 22,0	153,0 152,0	153,0 152,0	91,0 81,0	133,0 120,0	152,0 151,0	152,0 151,0	152,0 151,0	152,0 151,0	152,0 151,0	152,0 151,0				
24,0	151,0	151,0	72,0	108,0	144,0	149,0	149,0	149,0	149,0	149,0				
26,0	148,0		64,0	98,0	132,0	147,0	147,0			147,0				
28,0	148,0	148,0	58,0	89,0	121,0	143,0	146,0	146,0	146,0	146,0				
30,0	147,0		52,0	81,0	111,0		144,0			144,0				
32,0	146,0	146,0	46,5	74,0	103,0	131,0	142,0	142,0	142,0	142,0				
34,0	143,0		41,5	68,0	95,0	122,0 113,0	140,0	140,0	140,0 137,0	140,0				
36,0 38,0	139,0 135,0		37,5 33,5	63,0 58,0	88,0 82,0	106,0	134,0 128,0	137,0 134,0		137,0 135,0				
40,0	132,0	136,0	30,0	53,0	76,0	99,0	122,0	131,0	133,0	133,0				
44,0	124,0		24,1	45,5	66,0	88,0	109,0			128,0				
48,0	114,0	123,0	19,0	38,5	58,0	78,0	97,0	116,0		123,0				
52,0	104,0		14,7	33,0	51,0	69,0	87,0	105,0	114,0	118,0				
56,0	93,0	103,0	10,9	27,9	45,0	62,0	79,0	94,0		112,0				
60,0	83,0	94,0	7,6	23,5	39,5	55,0	70,0	84,0	97,0	106,0				
64,0	76,0	87,0		19,7	35,0	50,0 45,0	64,0	77,0	90,0 82,0	99,0 92,0				
68,0 72,0	69,0 63,0			16,4 13,4	30,5 26,9	40,0	58,0 52,0	70,0 63,0		92,0 85,0				
76,0	57,0			10,7	23,6	35,0	46,5	57,0		79,0				
80,0	52,0	61,0		8,3	20,6	31,5	42,5	53,0		73,0				
84,0	48,0	56,0		6,2	17,9	28,1	38,5	48,5	58,0	68,0				
88,0	43,5	51,0			15,5	24,5	34,5	44,0	53,0	63,0				
92,0	39,5				13,3	21,5	31,0	40,0		58,0				
96,0	36,5				11,3	19,4	28,0	37,0		54,0				
100,0 104,0	33,5 30,0				9,6 7,8	17,3 15,2	25,2 22,4	34,0 31,0	42,5 39,0	50,0 46,5				
104,0	27,7				6,3	13,6	20,3	28,2	36,0	40,5				
112,0	19,9	24,4			-,-	-,-	-,-	-,	1 1 7 1	- 7,1				
	4.0	10		4.0	4.0	4.0	4.0	4.0	10	4.0				
* n *	10	10	7	10	10	10	10	10	10	10				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>-∦o</b>														
m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
- 11/3														
						7		$\overline{}$			ſ		ır	`



074548									**	* 221				22.00
		l 1 n	n ><	t	CO	DE	> 54	438	<	V18	31 3	800	.x(x	()
m m	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0
16,0	109,0	131,0	131,0	131,0	131,0	131,0	131,0	131,0	111,0	135,0	135,0	135,0	135,0	135,0
18,0	95,0	129,0	130,0	130,0	130,0	130,0	130,0	130,0	97,0	134,0	134,0	134,0	134,0	134,0
20,0 22,0	84,0 74,0	115,0 103,0	129,0 128,0	129,0 128,0	129,0 128,0	129,0 128,0	129,0 128,0	129,0 128,0	86,0 76,0	121,0 108,0	133,0 132,0	133,0 132,0	133,0 132,0	133,0 132,0
24,0	66,0	92,0	119,0	128,0	128,0	128,0	128,0	128,0	67,0	97,0	127,0	131,0	131,0	131,0
26,0	59,0	83,0	108,0	127,0	127,0	127,0	127,0	127,0	60,0	88,0	116,0	129,0	129,0	129,0
28,0	52,0	76,0	99,0	122,0	125,0	125,0	125,0	125,0	54,0	80,0	106,0	126,0	128,0	128,0
30,0	47,0	69,0	90,0	112,0	123,0	126,0	126,0	126,0	48,0	73,0	98,0	122,0	126,0	126,0
32,0	42,0	62,0	83,0	104,0	121,0	125,0	125,0	125,0	43,0	67,0	90,0	113,0	125,0	125,0
34,0	37,5	57,0	76,0	96,0	115,0	125,0	125,0	125,0	38,5	61,0	83,0	105,0	123,0	123,0
36,0 38,0	33,5 29,9	52,0 47,5	71,0 65,0	89,0 83,0	108,0 101,0	122,0 116,0	122,0 118,0	122,0 118,0	34,5 31,0	56,0 51,0	77,0 71,0	98,0 91,0	119,0 111,0	120,0 116,0
40,0	26,6	43,5	60,0	77,0	94,0	111,0	115,0	118,0	27,5	47,0	66,0	85,0	104,0	113,0
44,0	20,9	36,5	52,0	67,0	83,0	98,0	108,0	114,0	21,7	39,5	57,0	75,0	92,0	106,0
48,0	16,0	30,5	44,5	59,0	73,0	88,0	100,0	109,0	16,8	33,0	49,5	66,0	82,0	98,0
52,0	11,8	25,2	38,5	52,0	65,0	78,0	91,0	100,0	12,6	27,8	43,0	58,0	73,0	89,0
56,0	8,2	20,7	33,0	45,5	58,0	71,0	82,0	91,0	8,9	23,1	37,5	52,0	66,0	80,0
60,0	5,1	16,8	28,5	40,0	52,0	63,0	73,0	82,0	5,8	19,1	32,5	45,5	59,0	71,0
64,0 68,0		13,4 10,4	24,4 20,8	35,5 31,0	46,5 41,5	56,0 51,0	65,0 60,0	75,0 69,0		15,5 12,4	28,1 24,3	40,5 36,0	53,0 48,0	64,0 58,0
72,0		7,7	17,6	27,5	37,0	46,0	54,0	63,0		9,6	20,9	32,0	43,0	53,0
76,0		5,2	14,7	24,0	32,5	40,5	48,5	56,0		7,1	17,8	28,4	38,0	47,0
80,0			12,1	20,7	28,5	36,5	44,0	51,0			15,1	24,7	33,5	42,5
84,0			9,7	18,3	25,5	33,0	40,0	47,5			12,6	22,0	30,0	39,0
88,0			7,6	15,9	22,5	29,4	36,5	43,5			10,4	19,2	26,9	35,0
92,0 96,0			5,7	13,6	19,4 16,8	25,9 22,7	32,5	39,5 36,0			8,4 6,5	16,5	23,5 20,5	31,5 28,0
100,0				11,4 9,8	15,0	20,6	29,2 26,6	33,0			6,5	14,1 12,5	20,5 18,6	25,5
104,0				8,1	13,3	18,5	23,9	30,0				10,9	16,8	23,0
108,0				6,7	11,6	16,5	21,3	27,2				9,3	14,9	20,5
112,0				5,4	10,2	14,7	19,3	24,8				7,9	13,3	18,5
116,0					8,8	13,1	17,5	22,4				6,7	11,7	16,7
* n *	7	8	8	8	8	8	8	8	7	8	8	8	8	8
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>zz</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
0-40														
m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
		LDB 20m			15	50	14 14	4,0 <sub>X</sub>		zz t				



074548									**	* 221			:	22.00
. 1		l r	n ><	t	CO	DE	> 54	438	<	V18	31 :	3800	.x(x	)
m m	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0				-
16,0	135,0	135,0	114,0	132,0	133,0	133,0	133,0	133,0	133,0	133,0				
18,0	134,0	134,0	100,0	132,0	132,0		132,0	132,0		132,0				
20,0	133,0	133,0	88,0	130,0	131,0	131,0	131,0	131,0	131,0	131,0				
22,0	132,0	132,0	78,0	117,0	129,0	129,0	129,0	129,0	129,0	129,0				
24,0	131,0	131,0	70,0	105,0	128,0	128,0	128,0	128,0	128,0	128,0				
26,0	129,0	129,0	62,0	95,0	127,0	127,0	127,0	127,0	127,0	127,0				
28,0	128,0	128,0	56,0	87,0	118,0	124,0	124,0	124,0	124,0	124,0				
30,0	126,0	126,0	50,0	79,0	109,0		123,0	123,0	123,0	123,0				
32,0	125,0	125,0	45,0	73,0	100,0	121,0	121,0	121,0	121,0	121,0				
34,0 36,0	123,0 120,0	123,0 120,0	40,5 36,0	67,0 61,0	93,0 86,0	119,0 111,0	119,0 116,0	119,0 117,0	119,0 117,0	119,0 117,0				
38,0	118,0	118,0	32,5	56,0	80,0	104,0	113,0	115,0	115,0	115,0				
40,0	116,0	116,0	29,0	52,0	75,0	97,0	110,0	113,0	113,0	113,0				
44,0	111,0	111,0	23,0	44,0	65,0	86,0	103,0	108,0	108,0	108,0				
48,0	107,0	107,0	18,0	37,5	57,0	76,0	95,0	104,0	104,0	104,0				
52,0	98,0	101,0	13,7	31,5	49,5	68,0	86,0	96,0	100,0	100,0				
56,0	90,0	96,0	10,0	26,8	43,5	60,0	77,0	89,0	97,0	97,0				
60,0	82,0	91,0	6,7	22,5	38,5	54,0	70,0	82,0	93,0	94,0				
64,0	75,0	85,0	-,-	18,8	33,5	48,5	62,0	75,0	88,0	90,0				
68,0	68,0	79,0		15,4	29,5	43,5	57,0	69,0	81,0	86,0				
72,0	62,0	72,0		12,5	25,9	39,0	51,0	63,0		81,0				
76,0	56,0	65,0		9,8	22,6	34,5	46,0	57,0	68,0	77,0				
80,0	51,0	60,0		7,5	19,6	30,5	41,5	52,0	62,0	72,0				
84,0	47,0	55,0		5,3	16,9	27,4	37,5	47,5	58,0	67,0				
88,0	43,0	51,0			14,5	24,2	34,0	43,5	53,0	63,0				
92,0	39,5	46,5			12,3	21,0	30,5	39,5	48,5	58,0				
96,0	35,5	42,5			10,4	18,2	27,0	36,0	44,5	53,0				
100,0	32,5	39,5			8,6	16,4	24,6	33,0	41,5	49,5				
104,0	29,9	36,5			7,0	14,7	22,2	30,0	38,5	46,0				
108,0	27,1	33,5			5,5	12,9	19,7	27,3	35,5	42,5				
112,0	24,6	31,0				11,4	17,8	24,9	32,5	38,0				
116,0	22,2	28,2				10,0	16,0	22,5	29,9	32,0				
						_			_	_				
* n *	8	8	7	8	8	8	8	8	8	8				
	15.0	15.0	19.0	19.0	19.0	10.0	10.0	10 0	10.0	10.0		+ -		
уу zz	15.0 300.0	15.0 350.0	18.0 0.0	18.0 50.0	18.0 100.0	18.0 150.0	18.0 200.0	18.0 250.0	18.0 300.0	18.0 350.0				
	300.0	330.0	0.0	30.0	100.0	130.0	200.0	230.0	300.0	330.0				
0-40														
<b>1</b>	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>Ш</b> m/s	-,•	-,-	-,-	-,-	-,-	-,-	-,-	-,-	-,-	-,0		+ -		
						l	<u> </u>		L	L				
									No.	AD.				
			I			. 1	<b>=</b>		<b>■ &amp;</b>	KID.			18	



074548									**	* 221				22.00
		] i r	n ><	t	СО	DE	> 54	439	<	V18	31 3	900	.x(x	()
m m	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0
16,0	106,0	113,0	113,0	113,0	113,0	113,0	113,0	113,0		116,0	116,0	116,0	116,0	116,0
18,0	93,0	113,0	113,0	113,0	113,0	113,0	113,0	113,0	95,0	115,0	115,0	115,0	115,0	115,0
20,0	82,0	112,0	112,0	112,0	112,0	112,0	112,0	112,0	83,0	115,0	115,0	115,0	115,0	115,0
22,0	72,0 64,0	100,0 90,0	111,0 111,0	111,0 111,0	111,0	111,0	111,0 111,0	111,0	74,0 66,0	106,0 95,0	113,0 112,0	113,0 112,0	113,0 112,0	113,0
24,0 26,0	57,0	81,0	106,0	110,0	111,0 110,0	111,0 110,0	110,0	111,0 110,0	59,0	95,0 86,0	111,0	111,0	111,0	112,0 111,0
28,0	51,0	74,0	97,0	109,0	109,0	109,0	109,0	109,0	52,0	78,0	104,0	109,0	109,0	109,0
30,0	45,5	67,0	88,0	106,0	108,0	108,0	108,0	108,0	47,0	71,0	96,0	107,0	107,0	103,0
32,0	40,5	61,0	81,0	102,0	107,0	107,0	107,0	107,0	42,0	65,0	88,0	106,0	106,0	106,0
34,0	36,5	56,0	75,0	94,0	106,0	106,0	106,0	106,0	37,5	59,0	81,0	103,0	104,0	104,0
36,0	32,5	51,0	69,0	87,0	105,0	105,0	105,0	105,0	33,5	54,0	75,0	96,0	102,0	102,0
38,0	28,9	46,5	64,0	81,0	99,0	102,0	102,0	102,0	29,8	50,0	70,0	90,0	99,0	100,0
40,0	25,6	42,5	59,0	76,0	92,0	98,0	100,0	100,0	26,6	45,5	65,0	84,0	96,0	98,0
44,0	20,0	35,5	51,0	66,0	81,0	92,0	96,0	96,0	20,8	38,5	56,0	73,0	89,0	94,0
48,0	15,2	29,4	43,5	58,0	72,0	85,0	92,0	92,0	15,9	32,0	48,5	65,0	81,0	90,0
52,0	11,0	24,3	37,5	51,0	64,0	77,0	86,0	87,0	11,8	26,8	42,0	57,0 50,0	72,0	84,0
56,0 60,0	7,5	19,8 16,0	32,0 27,6	44,5 39,0	57,0 51,0	69,0 62,0	79,0 72,0	82,0 77,0	8,2 5,0	22,2 18,2	36,5 31,5	44,5	65,0 58,0	77,0 70,0
64,0		12,6	23,5	34,5	45,5	55,0	64,0	73,0	3,0	14,7	27,2	39,5	52,0	63,0
68,0		9,5	19,9	30,5	40,5	50,0	59,0	67,0		11,6	23,4	35,0	47,0	57,0
72,0		6,8	16,7	26,5	36,5	45,0	54,0	62,0		8,8	20,0	31,0	42,5	52,0
76,0		,	13,8	23,2	32,0	40,5	48,5	56,0		6,2	16,9	27,6	37,5	47,0
80,0			11,2	19,9	27,7	35,5	43,0	51,0			14,2	23,8	33,0	42,0
84,0			8,8	17,0	24,3	32,0	39,0	46,0			11,7	20,7	29,3	38,0
88,0			6,7	14,9	21,7	28,6	35,5	42,5			9,4	18,4	26,3	34,5
92,0				12,6	19,1	25,4	32,0	39,0			7,4	16,1	23,3	31,0
96,0				10,6	16,5	22,3	28,6	35,0			5,5	13,8	20,3	27,5
100,0 104,0				8,7 7,0	14,1 12,5	19,2 17,5	25,3 23,1	31,5 29,0				11,6 10,1	17,5 15,8	24,2 22,1
104,0				5,4	10,9	15,7	20,9	26,4				8,6	14,1	20,0
112,0				0, 1	9,3	13,9	18,7	23,7				7,1	12,4	17,8
116,0					7,9	12,3	16,6	21,3				5,7	10,8	15,9
120,0					6,7	10,9	15,1	19,4				,	9,5	14,4
* n *	7	7	7	7	7	7	7	7	6	7	7	7	7	7
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
_														
o <b>_{10</b>														
<b>■</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
							_	_						
	S	I DB	l			<u> </u>	14	1,0 x	ROA.					



074548									^^	* 221				22.0C
		] i r	n ><	t	CO	DE	> 54	439	<	V18	31 3	900	.x(x	)
m m	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0				
16,0	116,0	116,0		114,0	114,0	114,0	114,0	114,0	114,0	114,0				
18,0	115,0	115,0	97,0	113,0	113,0	113,0	113,0		113,0	113,0				
20,0	115,0	115,0	86,0	112,0	112,0	112,0	112,0	112,0	112,0	112,0				
22,0	113,0	113,0	76,0	111,0	111,0	111,0	111,0	111,0	111,0	111,0				
24,0	112,0	112,0	68,0	103,0	109,0	109,0	109,0	109,0	109,0	109,0				
26,0 28,0	111,0 109,0	111,0 109,0	61,0 54,0	93,0 85,0	108,0 106,0	108,0 106,0	108,0 106,0	108,0 106,0	108,0 106,0	108,0 106,0				
30,0	103,0	103,0	48,5	78,0	103,0	104,0	104,0	104,0	104,0	100,0				
32,0	106,0	106,0	43,5	71,0	98,0	103,0	103,0	103,0	103,0	103,0				
34,0	104,0	104,0	39,0	65,0	91,0	101,0	101,0	101,0	101,0	101,0				
36,0	102,0	102,0	35,0	60,0	85,0	99,0	99,0	99,0	99,0	99,0				
38,0	100,0	100,0	31,5	55,0	79,0	96,0	97,0	97,0	97,0	97,0				
40,0	98,0	98,0	28,0	51,0	73,0	93,0	95,0	95,0	95,0	95,0				
44,0	94,0	94,0	22,1	43,0	64,0	84,0	91,0	91,0	91,0	91,0				
48,0	90,0	90,0	17,1	36,5	56,0	75,0	87,0	87,0	87,0	87,0				
52,0	85,0	85,0	12,9	30,5	48,5	66,0	81,0	82,0	82,0	82,0				
56,0	81,0	82,0	9,2	25,9	42,5	59,0	75,0	79,0	80,0	80,0				
60,0	76,0	79,0	6,0	21,6	37,5	53,0	68,0	76,0	77,0	77,0				
64,0	72,0	76,0		17,9	32,5	47,5	61,0	73,0	74,0	74,0				
68,0 72,0	67,0 62,0	72,0 67,0		14,6 11,6	28,6 24,9	42,5 38,0	56,0 51,0	68,0 62,0	71,0 67,0	72,0 70,0				
72,0 76,0	56,0	63,0		9,0	24,9	34,5	46,0	57,0	64,0	69,0				
80,0	51,0	58,0		6,6	18,7	30,0	40,5	51,0	60,0	67,0				
84,0	46,0	54,0		0,0	16,0	26,4	36,5	46,5	56,0	64,0				
88,0	42,5	50,0			13,6	23,6	33,0	43,0	52,0	60,0				
92,0	38,5	46,5			11,3	20,8	29,8	39,0	48,5	56,0				
96,0	35,0	42,5			9,3	18,1	26,5	35,5	44,0	52,0				
100,0	31,5	38,5			7,5	15,4	23,2	32,0	40,5	48,5				
104,0	28,8	35,5			5,8	13,8	21,2	29,2	37,5	45,5				
108,0	26,2	33,0				12,2	19,1	26,6	34,5	42,0				
112,0	23,6	30,0				10,6	17,1	24,0	31,5	39,0				
116,0	21,1	27,4				9,1	15,2	21,5	28,9	35,0				
120,0	19,3	25,2				7,9	13,7	19,6	26,7	30,0				
* n *	7	7	6	7	7	7	7	7	7	7				
уу —	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
yy	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	000.0	000.0	0.0	00.0	100.0	100.0	200.0	200.0	000.0	000.0				
<u>~40</u>														
	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>Ш</b> m/s	0,0	0,0	0,0	0,0	0,0		- 5,5	- 5,5	,,,,	0,0				
						<u> </u>			_					
$\overline{}$									4					





074548									**	* 221				22.00
		] i r	n ><	t	CO	DE	> 54	440	<	V18	31 3	A00	.x(x	()
m m	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0
18,0	89,0	95,0	95,0	95,0	95,0	95,0	95,0	95,0	90,0	98,0	98,0	98,0	98,0	98,0
20,0	78,0	94,0	94,0	94,0	94,0	94,0	94,0	94,0	80,0	97,0	97,0	97,0	97,0	97,0
22,0 24,0	69,0	93,0 87,0	93,0 93,0	93,0 93,0	93,0 93,0	93,0 93,0	93,0 93,0	93,0 93,0	70,0 62,0	96,0 92,0	96,0 95,0	96,0 95,0	96,0 95,0	96,0 95,0
26,0	61,0 54,0	78,0	93,0	93,0	93,0	93,0	93,0	93,0	56,0	83,0	93,0	93,0	93,0	93,0
28,0	48,0	71,0	93,0	93,0	93,0	93,0	93,0	93,0	49,5	75,0	92,0	92,0	92,0	92,0
30,0	43,0	64,0	85,0	92,0	92,0	92,0	92,0	92,0	44,0	68,0	90,0	90,0	90,0	90,0
32,0	38,0	58,0	78,0	90,0	90,0	90,0	90,0	90,0	39,0	62,0	85,0	89,0	89,0	89,0
34,0	34,0	53,0	72,0	89,0	89,0	89,0	89,0	89,0	35,0	57,0	78,0	87,0	87,0	87,0
36,0	29,9	48,0	66,0	84,0	88,0	88,0	88,0	88,0	31,0	52,0	72,0	86,0	86,0	86,0
38,0	26,4	43,5	61,0	78,0	86,0	86,0	86,0	86,0	27,4	47,0	67,0	84,0	84,0	84,0
40,0 44,0	23,3 17,7	40,0 33,0	56,0 48,0	73,0 63,0	83,0 77,0	84,0 80,0	84,0 80,0	84,0 80,0	24,2 18,5	43,0 36,0	62,0 53,0	81,0 71,0	82,0 78,0	82,0 78,0
44,0	13,0	27,0	46,0 41,0	55,0	69,0	76,0	76,0	76,0	13,7	29,8	46,0	62,0	76,0	74,0
52,0	8,9	22,0	35,0	48,0	61,0	72,0	72,0	72,0	9,6	24,6	39,5	54,0	69,0	70,0
56,0	5,4	17,6	29,9	42,0	54,0	67,0	68,0	68,0	6,1	20,0	34,0	48,0	62,0	66,0
60,0		13,8	25,3	37,0	48,5	60,0	64,0	66,0		16,1	29,2	42,5	55,0	62,0
64,0		10,4	21,3	32,0	43,0	54,0	60,0	63,0		12,6	25,0	37,5	49,5	59,0
68,0		7,5	17,7	28,0	38,5	47,5	56,0	60,0		9,5	21,2	33,0	44,5	55,0
72,0			14,5	24,3	34,0	43,0	52,0	56,0		6,7	17,8	28,9	40,0	50,0
76,0 80,0			11,7 9,1	21,0 18,0	30,5 26,3	38,5 34,5	47,0 42,0	52,0 48,0			14,8 12,1	25,4 22,2	36,0 31,5	45,5 40,5
84,0			6,8	15,0	20,3	29,8	37,5	44,0			9,6	18,9	27,3	36,0
88,0			0,0	12,8	19,3	26,4	33,5	40,5			7,3	16,3	24,1	32,0
92,0				10,5	17,1	23,7	30,5	37,0			5,3	14,2	21,6	29,0
96,0				8,5	15,0	21,0	27,1	33,5				12,0	19,1	25,9
100,0				6,6	12,8	18,3	23,9	30,0				10,0	16,6	22,8
104,0					10,7	15,6	20,7	26,7				8,2	14,1	19,7
108,0 112,0					9,3	14,0 12,4	18,8	24,4 22,2				6,5	12,5 10,9	17,9 16,2
116,0					7,8 6,4	10,8	17,0 15,3	19,9					9,4	14,4
120,0					5,0	9,3	13,5	17,7					7,8	12,7
124,0					0,0	8,0	12,1	16,2					6,6	11,4
128,0						6,2	9,7	13,3					5,0	9,1
* n *	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	45.5	4= -	45.5	45.5	4= -	4.5.
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
_46														
<b>مال</b> م	0.0		0.0		0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	
<b>W</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
										^				



074548									**	* 221				22.00
	MM	] i r	n ><	t	CO	DE	> 54	440	<	V18	31 :	3A00	.x(x	)
m m	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0				
18,0	98,0	98,0	93,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0				
20,0	97,0	97,0	82,0	95,0	95,0	95,0	95,0	95,0	95,0	95,0				
22,0	96,0	96,0	73,0	94,0	94,0	94,0	94,0	94,0	94,0	94,0				
24,0 26,0	95,0 93,0	95,0 93,0	65,0 58,0	92,0 90,0	92,0 91,0	92,0 91,0	92,0 91,0	92,0 91,0	92,0 91,0	92,0 91,0				
28,0	92,0	92,0	51,0	82,0	89,0	89,0	89,0	89,0	89,0	89,0				
30,0	90,0	90,0	46,0	74,0	88,0	88,0	88,0	88,0	88,0	88,0				
32,0	89,0	89,0	41,0	68,0	86,0	86,0	86,0	86,0	86,0	86,0				
34,0	87,0	87,0	36,5	62,0	85,0	85,0	85,0	85,0	85,0	85,0				
36,0	86,0	86,0	32,5	57,0	81,0	83,0	83,0	83,0	83,0	83,0				
38,0	84,0	84,0	28,9	52,0	76,0	81,0	81,0	81,0	81,0	81,0				
40,0	82,0	82,0	25,6	48,0	70,0	79,0	79,0	79,0	79,0	79,0				
44,0 48,0	78,0	78,0 74,0	19,8	40,5 34,0	61,0	75,0 71,0	75,0	75,0	75,0 72,0	75,0 72,0				
52,0	74,0 70,0	74,0	14,9 10,7	28,4	53,0 46,0	64,0	72,0 68,0	72,0 68,0		68,0		+		
56,0	67,0	67,0	7,1	23,6	40,0	57,0	64,0	65,0	65,0	65,0				
60,0	65,0	65,0	.,.	19,5	35,0	51,0	60,0	63,0		63,0				
64,0	62,0	62,0		15,8	30,5	45,0	57,0	60,0	60,0	60,0				
68,0	59,0	59,0		12,5	26,4	40,5	53,0	58,0	58,0	58,0				
72,0	55,0	57,0		9,5	22,7	36,0	48,5	54,0	56,0	56,0				
76,0	51,0	55,0		6,9	19,5	32,0	44,0	51,0		54,0				
80,0	47,5	53,0			16,5	28,5	39,5	47,5	53,0	53,0				
84,0	44,0	51,0			13,9	24,3	35,0	44,0	51,0	51,0				
88,0 92,0	40,0 37,0	48,0 44,5			11,4 9,2	21,3 19,0	31,0 28,1	41,0 37,5	48,5 45,5	49,5 48,0				
96,0	33,5	41,0			7,2	16,7	25,0	34,0	42,0	46,0				
100,0	30,0	37,5			5,4	14,4	22,0	30,5	38,5	44,5				
104,0	26,6	33,5			,	12,1	19,0	27,1	35,5	43,0				
108,0	24,2	31,0				10,6	17,2	24,8	32,5	40,0				
112,0	22,0	28,3				9,1	15,5	22,5	30,0	37,0				
116,0	19,8	25,7				7,7	13,8	20,2	27,4	34,0				
120,0	17,6	23,1				6,2	12,0	17,9	24,7	31,0				
124,0 128,0	16,1 13,1	21,1 17,2				5,0	10,7 8,5	16,4 13,4	22,5 18,3	26,6 20,2				
* n *	6	6	6	6	6	6	6	6	6	6				
••	U	0	U	0	U					- 0				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
0-10	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>Ш</b> m/s	9,0	3,0	9,0	9,0	9,0	9,0	9,0	3,0	3,0	9,0				
									<b>(a)</b>	<b>A</b>	$\overline{}$			
			1		_	. 1		10	16/	KIV)	1			



074548	8 *** 221 22.00													
		] i r	n ><	t	CO	DE	> 54	441	<	V18	31 3	B00	.x(x	()
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0
18,0	82,0	82,0	82,0	82,0	82,0	82,0	82,0	82,0	85,0	85,0	85,0	85,0	85,0	85,0
20,0	76,0	81,0	81,0	81,0	81,0	81,0	81,0	81,0	77,0	83,0	83,0	83,0	83,0	83,0
22,0	67,0	81,0	81,0	81,0	81,0	81,0	81,0	81,0	68,0	82,0	82,0	82,0	82,0	82,0
24,0	59,0	81,0	81,0	81,0	81,0	81,0	81,0	81,0	61,0	81,0	81,0	81,0	81,0	81,0
26,0	53,0	76,0	80,0	80,0	80,0	80,0	80,0	80,0	54,0	80,0	80,0	80,0	80,0	80,0
28,0 30,0	46,5 41,5	69,0 62,0	79,0 79,0	79,0 79,0	79,0 79,0	79,0 79,0	79,0 79,0	79,0 79,0	48,0 42,5	73,0 67,0	78,0 77,0	78,0 77,0	78,0 77,0	78,0 77,0
32,0	37,0	57,0	76,0	77,0	77,0	77,0	77,0	77,0	38,0	61,0	77,0 75,0	75,0	75,0	75,0
34,0	32,5	51,0	70,0	76,0	76,0	76,0	76,0	76,0	33,5	55,0	74,0	74,0	74,0	74,0
36,0	28,9	47,0	65,0	74,0	74,0	74,0	74,0	74,0	29,9	50,0	71,0	72,0	72,0	72,0
38,0	25,4	42,5	60,0	73,0	73,0	73,0	73,0	73,0	26,4	46,0	65,0	71,0	71,0	71,0
40,0	22,3	38,5	55,0	71,0	71,0	71,0	71,0	71,0	23,2	42,0	61,0	69,0	69,0	69,0
44,0	16,8	32,0	47,0	62,0	68,0	68,0	68,0	68,0	17,7	35,0	52,0	65,0	65,0	65,0
48,0	12,2	26,1	40,0	54,0	64,0	64,0	64,0	64,0	13,0	28,9	45,0	61,0	62,0	62,0
52,0	8,2	21,2	34,0	47,0	60,0	60,0	60,0	60,0	8,9	23,7	38,5	53,0	59,0	59,0
56,0		16,9	29,0	41,0	53,0	57,0	57,0	57,0	5,4	19,2	33,0	47,0	55,0	55,0
60,0		13,1	24,5	36,0	47,5	53,0 49,5	55,0	55,0		15,3	28,4	41,5	51,0	53,0
64,0 68,0		9,7 6,8	20,5 17,0	31,5 27,2	42,0 37,5	49,5	52,0 50,0	52,0 50,0		11,9 8,8	24,2 20,4	36,5 32,0	47,0 43,5	51,0 48,5
72,0		0,0	13,8	23,6	33,5	42,0	47,5	47,5		6,0	17,1	28,2	39,0	46,0
76,0			11,0	20,2	29,5	38,0	43,5	45,0		0,0	14,1	24,6	35,0	42,5
80,0			8,4	17,3	26,1	34,0	40,0	43,0			11,4	21,4	31,5	39,0
84,0			6,1	14,6	22,6	29,8	36,5	41,0			8,9	18,5	27,3	35,0
88,0			,	12,1	18,9	25,7	32,5	39,0			6,7	15,9	23,3	31,5
92,0				9,8	16,4	22,8	29,5	36,0				13,5	20,5	28,3
96,0				7,8	14,5	20,5	26,7	33,0				11,3	18,4	25,6
100,0				5,9	12,6	18,2	23,9	30,0				9,3	16,2	22,8
104,0					10,7	15,9	21,1	26,9				7,5	14,1	20,1
108,0					8,8	13,6	18,3	23,8				5,8	11,9	17,4
112,0 116,0					7,3 6,0	11,9 10,5	16,4 14,8	21,6 19,7					10,4 9,0	15,6 14,0
120,0					0,0	9,0	13,3	17,8					7,6	12,5
124,0						7,6	11,7	15,9					6,2	10,9
128,0						6,3	10,3	14,3					5,0	9,6
* n *	5	5	5	5	5	5	5	5	5	5	5	5	5	5
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
-														
<b>o-∦o</b>														
∥ <b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
_ 1113														
											_			
1					_	$\overline{}$					I	`	ıſ	`





074548										* 221				22.00
		] i r	m ><	t	CO	DE	> 54	441	<	V18	31 3	B00	.x(x	<b>(</b> )
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0
132,0						5,3	9,1	13,0						8,4
* n *	5	5	5	5	5	5	5	5	5	5	5	5	5	5
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>ZZ</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
0-10														
m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0



074548									^^	* 221				22.0C
		] i r	n ><	t	СО	DE	> 54	441	<	V18	31 3	B00	.x(x	)
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0				
18,0	85,0	85,0	83,0	83,0	83,0	83,0	83,0	83,0	83,0	83,0				
20,0	83,0	83,0	80,0	82,0	82,0	82,0	82,0	82,0	82,0	82,0				
22,0	82,0	82,0	71,0	80,0	80,0	80,0	80,0	80,0	80,0	80,0				
24,0	81,0	81,0	63,0	79,0	79,0	79,0	79,0	79,0	79,0	79,0				
26,0 28,0	80,0 78,0	80,0 78,0	56,0 50,0	77,0 76,0	77,0 76,0	77,0 76,0	77,0 76,0	77,0 76,0	77,0 76,0	77,0 76,0				
30,0	77,0	77,0	44,5	73,0	74,0	74,0	74,0	74,0	74,0	74,0				
32,0	75,0	75,0	39,5	66,0	73,0	73,0	73,0	73,0	73,0	73,0				
34,0	74,0	74,0	35,5	61,0	71,0	71,0	71,0	71,0	71,0	71,0				
36,0	72,0	72,0	31,5	56,0	70,0	70,0	70,0	70,0	70,0	70,0				
38,0	71,0	71,0	27,9	51,0	68,0	68,0	68,0	68,0	68,0	68,0				
40,0	69,0	69,0	24,6	47,0	67,0	67,0	67,0	67,0	67,0	67,0				
44,0	65,0	65,0	19,0	39,5	60,0	63,0	63,0	63,0	63,0	63,0				
48,0	62,0	62,0	14,1	33,0	52,0	60,0	60,0	60,0	60,0	60,0				
52,0	59,0	59,0	10,0	27,5	45,0	57,0	57,0	57,0	57,0	57,0				
56,0	55,0	55,0	6,4	22,8	39,5	53,0	53,0	53,0	53,0	53,0				
60,0	53,0	53,0		18,7	34,0	49,0	51,0	51,0		51,0				
64,0	51,0	51,0		15,0	29,6	44,0	49,0	49,5	49,5	49,5				
68,0 73.0	48,5	48,5		11,8	25,6 22,0	39,5	47,0	47,5 45,5	47,5 45,5	47,5				
72,0 76,0	46,5 44,5	46,5 45,0		8,9 6,3	18,7	35,0 31,0	45,0 41,5	44,0	44,0	45,5 44,0				
70,0 80,0	42,5	43,5		0,3	15,8	27,7	37,5	42,0	42,5	42,5				
84,0	40,5	41,5			13,2	24,5	34,0	40,5	41,0	41,0				
88,0	38,5	40,0			10,8	20,6	30,5	39,0	40,0	40,0				
92,0	36,0	38,0			8,6	18,0	27,3	36,5	38,5	39,0				
96,0	33,0	36,0			6,6	16,0	24,7	33,5	36,5	38,0				
100,0	29,8	34,0				14,0	22,0	30,0	35,0	37,5				
104,0	26,7	32,0				12,0	19,3	27,1	33,0	37,0				
108,0	23,6	30,0				10,1	16,7	23,9	31,5	36,5				
112,0	21,4	27,7				8,6	14,9	21,7	29,2	34,5				
116,0	19,5	25,3				7,3	13,4	19,8	26,8	32,5				
120,0 124,0	17,6	23,0				5,9	11,8	17,9	24,3	30,0				
124,0	15,7 14,2	20,6 18,7					10,3 9,0	16,0 14,4	21,9 20,0	27,7 20,5				
* n *	5	5	5	5	5	5	5	5	5	5				
	3	3	3	3	3	3	3	3	3	3				
уу —	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
									-					
<u>~40</u>									-					
ישיביי	0.0		0.0											
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
						$\overline{}$	_	$\overline{}$						





074548									**	* 221				22.00
		] i r	n ><	t	CO	DE	> 54	441	<	V18	31	3B00	.x(x	)
			138,0	138,0	138,0	138,0	138,0							
132,0	12,8	17,3					7,8	11,1	13,5	13,5				
* n *	5	5	5	5	5	5	5	5	5	5				
уу zz	15.0 300.0	15.0 350.0	18.0	18.0 50.0	18.0	18.0	18.0	18.0 250.0	18.0 300.0	18.0 350.0				
	000.0	000.0	0.0	00.0	100.0	100.0	200.0	200.0	000.0	000.0				
<b>D-{+0</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
,														



074548									**	* 223				22.00
		l ı	n ><	t	CO	DE	> 54	142	<	V18	31 3	<b>C</b> 00	.x(x	)
m m	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0
11,0	222,0	284,0	293,0	293,0	293,0	293,0	293,0	293,0	225,0	292,0	292,0	292,0	292,0	292,0
12,0	202,0	259,0	294,0	294,0	294,0	294,0	294,0	294,0	205,0	271,0	293,0	293,0	293,0	293,0
14,0	170,0	220,0	270,0	291,0	295,0	295,0	295,0	295,0	173,0	230,0	286,0	294,0	294,0	294,0
16,0	146,0	190,0	234,0	278,0	298,0	298,0	298,0	298,0	149,0	199,0	249,0	292,0	297,0	297,0
18,0 20,0	127,0 112,0	166,0 147,0	206,0 183,0	245,0 219,0	285,0 254,0	289,0 272,0	289,0 282,0	289,0 293,0	129,0 114,0	174,0 154,0	219,0 195,0	264,0 236,0	289,0 269,0	292,0 282,0
22,0	99,0	132,0	164,0	197,0	229,0	254,0	272,0	290,0	101,0	138,0	175,0	212,0	249,0	271,0
24,0	88,0	118,0	148,0	178,0	208,0	236,0	255,0	273,0	90,0	124,0	158,0	193,0	227,0	253,0
26,0	79,0	107,0	135,0	163,0	190,0	218,0	236,0	253,0	81,0	112,0	144,0	176,0	207,0	234,0
28,0	71,0	97,0	123,0	149,0	175,0	199,0	217,0	233,0	73,0	102,0	132,0	161,0	191,0	215,0
30,0	65,0	89,0	113,0	137,0	161,0	181,0	198,0	213,0	66,0	94,0	121,0	149,0	174,0	196,0
32,0	59,0	81,0	104,0	127,0	150,0	169,0	186,0	201,0	60,0	86,0	112,0	138,0	163,0	184,0
34,0	53,0	75,0	96,0	118,0	139,0	158,0	175,0	189,0	55,0	79,0	104,0	128,0	152,0	172,0
36,0 38,0	48,5 44,5	69,0 64,0	89,0 83,0	110,0 102,0	129,0 119,0	147,0 135,0	163,0 151,0	177,0 164,0	50,0 45,5	73,0 67,0	96,0 88,0	119,0 110,0	141,0 130,0	160,0 148,0
40,0	40,5	59,0	77,0	95,0	112,0	127,0	142,0	155,0	41,5	62,0	82,0	102,0	122,0	140,0
44,0	33,5	50,0	67,0	83,0	99,0	113,0	127,0	140,0	34,5	53,0	71,0	89,0	108,0	124,0
48,0	27,9	43,0	58,0	73,0	86,0	99,0	112,0	124,0	28,7	45,5	62,0	79,0	95,0	109,0
52,0	23,1	37,5	51,0	65,0	78,0	90,0	102,0	113,0	23,8	39,5	55,0	70,0	85,0	99,0
56,0	19,1	32,5	45,0	58,0	70,0	81,0	92,0	102,0	19,7	34,5	48,5	63,0	77,0	89,0
60,0	15,7	28,2	40,5	52,0	63,0	73,0	83,0	93,0	16,2	30,0	43,5	57,0	69,0	81,0
64,0	12,8	24,4	36,0	47,0	57,0	66,0	76,0	85,0	13,3	26,3	39,0	51,0	63,0	74,0
68,0	10,4	21,3	32,0	42,5	51,0	60,0	69,0	78,0	10,9	23,1	35,0	46,5	57,0	67,0
72,0	8,5	18,8	29,0	39,0	47,5	56,0	64,0	68,0	9,0	20,4	32,0	43,0	53,0	61,0
* n *	14	18	19	19	19	19	19	19	14	19	19	19	19	19
	40.0	40.0	40.0	40.0	40.5	40.5	40.5	40.5	45.0	45.5	45.0	45.0	45.0	45.5
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>ZZ</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
o <b>-fo</b>														
l III	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
<b>Ш</b> m/s	₹,0	9,0	₹,0	9,0	9,0	9,0	9,0	9,0	9,0	3,0	₹,0	9,0	₹,0	9,0
									(b)	<b>A</b>				
			I		-		<b>1</b> /	10	167	ASSIV?	1		11	



074548									**	* 223				22.00
		] i n	n ><	t	CO	DE	> 54	442	<	V18	31 3	3 <b>C</b> 00	).x(x	)
m m	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0	72,0				
11,0	292,0	292,0	231,0	292,0	292,0	292,0	292,0	292,0	292,0	292,0				
12,0	293,0	293,0	210,0	288,0	293,0	293,0	293,0	293,0	293,0	293,0				
14,0	294,0	294,0	178,0	245,0	290,0	294,0	294,0	294,0	294,0	294,0				
16,0	297,0	297,0	153,0	212,0	271,0	296,0	296,0	296,0	296,0	296,0				
18,0	292,0	292,0	133,0	186,0	239,0	287,0	291,0	291,0	291,0	291,0				
20,0 22,0	294,0 291,0	300,0 302,0	117,0 104,0	165,0 148,0	213,0 192,0	261,0 236,0	280,0 270,0	296,0 296,0	299,0 301,0	299,0 301,0				
24,0	274,0	287,0	93,0	133,0	174,0	214,0	252,0	278,0	287,0	291,0				
26,0	255,0	269,0	83,0	121,0	158,0	196,0	233,0		271,0	281,0				
28,0	235,0		75,0	110,0	145,0		214,0		255,0	270,0				
30,0	215,0	233,0	68,0	101,0	133,0	166,0	194,0		239,0	260,0				
32,0	203,0	219,0	62,0	93,0	123,0	153,0	182,0	204,0	225,0	245,0				
34,0	190,0	206,0	56,0	85,0	113,0	141,0	170,0	192,0	212,0	231,0				
36,0	177,0	193,0	51,0	78,0	104,0	131,0	157,0	179,0	198,0	216,0				
38,0	165,0	180,0	46,5	72,0	96,0	121,0	146,0	166,0	185,0	202,0				
40,0	156,0 140,0	171,0 154,0	42,5	66,0	90,0	113,0	137,0		175,0	192,0				
44,0 48,0	124,0	137,0	35,5 29,7	57,0 49,0	78,0 68,0	99,0 88,0	120,0 107,0	141,0 125,0	158,0 140,0	173,0 155,0				
52,0	113,0	125,0	24,8	43,0	61,0	78,0	96,0	113,0	129,0	142,0				
56,0	102,0	114,0	20,6	37,5	54,0	70,0	86,0	103,0	117,0	130,0				
60,0	92,0	104,0	17,1	33,0	48,5	63,0	78,0	93,0	107,0	118,0				
64,0	85,0	96,0	14,1	29,1	43,5	58,0	72,0	86,0	98,0	107,0				
68,0	78,0	88,0	11,6	25,7	39,5	53,0	66,0	78,0	89,0	94,0				
72,0	66,0	71,0	9,7	22,9	36,0	48,5	57,0	63,0	68,0	68,0				
* n *	19	20	15	19	19	19	19	19	20	20				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>_∦o</b>														
<b> </b>	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
														$\overline{}$
						. $\Box$	1,	1 0	No.	AD.		·		·



074548									**	* 223				22.00
	MM	l i n	n ><	t	CO	DE	> 54	443	<	V18	31 3	D00	.x(x	)
m	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0
12,0	194,0	249,0	281,0	281,0	281,0	281,0	281,0	281,0	197,0	261,0	281,0	281,0	281,0	281,0
14,0	164,0	212,0	261,0	283,0	283,0	283,0	283,0	283,0	167,0	222,0	277,0	282,0	282,0	282,0
16,0 18,0	141,0 123,0	184,0 161,0	227,0 200,0	268,0 238,0	280,0 277,0	284,0 286,0	284,0 286,0	284,0 286,0	143,0 125,0	192,0 169,0	241,0 213,0	275,0 256,0	283,0 285,0	283,0 285,0
20,0	108,0	143,0	178,0	213,0	247,0	270,0	274,0	274,0	110,0	150,0	189,0	229,0	267,0	273,0
22,0	95,0	127,0	159,0	191,0	223,0	250,0	261,0	273,0	97,0	134,0	170,0	207,0	243,0	260,0
24,0	85,0	115,0	144,0	173,0	203,0	231,0	249,0	265,0	87,0	120,0	154,0	188,0	221,0	247,0
26,0	76,0	104,0	131,0	158,0	186,0	213,0	232,0	248,0	78,0	109,0	140,0	171,0	202,0	231,0
28,0	69,0	94,0	120,0	145,0	171,0	196,0	216,0	231,0	70,0	99,0	128,0	157,0	186,0	214,0
30,0	62,0	86,0	110,0	134,0	158,0	181,0	200,0		63,0	91,0	118,0	145,0	172,0	197,0
32,0	56,0	79,0	101,0	124,0	146,0	165,0	183,0	197,0	57,0	83,0	109,0	134,0	159,0	181,0
34,0	51,0	72,0	93,0	115,0	136,0	155,0	172,0	186,0	52,0	76,0	101,0	125,0	149,0	169,0
36,0 38,0	46,5	66,0	87,0	107,0 100,0	127,0	145,0 135,0	162,0	175,0	47,5 43,5	70,0	93,0 87.0	116,0 109,0	139,0 130,0	159,0
38,0 40,0	42,0 38,5	61,0 57,0	80,0 75,0	93,0	119,0 110,0	126,0	151,0 141,0	165,0 154,0	39,5	65,0 60,0	87,0 81,0	109,0	120,0	148,0 138,0
44,0	32,0	48,5	65,0	82,0	97,0	111,0	125,0	138,0	33,0	52,0	70,0	88,0	106,0	122,0
48,0	26,6	42,0	57,0	72,0	86,0	99,0	112,0	124,0	27,4	44,5	61,0	78,0	94,0	109,0
52,0	21,9	36,5	50,0	64,0	75,0	87,0	98,0	110,0	22,5	38,5	54,0	69,0	83,0	96,0
56,0	17,8	31,0	44,0	57,0	68,0	79,0	90,0	101,0	18,4	33,5	47,5	62,0	76,0	88,0
60,0	14,3	26,8	39,0	51,0	61,0	71,0	81,0	91,0	14,8	28,8	42,5	55,0	68,0	79,0
64,0	11,3	22,9	34,5	45,0	55,0	64,0	74,0	83,0	11,8	24,8	37,5	50,0	61,0	72,0
68,0	8,8	19,7	30,5	40,5	49,5	59,0	67,0	76,0	9,3	21,4	33,5	45,0	56,0	66,0
72,0 76,0	6,6	16,9 14,5	27,1 24,2	36,5 33,0	44,5 41,0	53,0 48,5	61,0 57,0	70,0 64,0	7,1 5,2	18,5 16,0	29,9 26,8	40,5 37,0	50,0 46,0	60,0 55,0
70,0		14,5	27,2	33,0	71,0	70,0	37,0	04,0	5,2	10,0	20,0	37,0	40,0	33,0
* n *	12	16	18	18	18	18	18	18	12	17	18	18	18	18
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
o-fo m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
	I		l		ء ا	. 1	1/	1.0 x	<b>(4)</b>		1			



074548									**	* 223				22.00
	MM	l n	n ><	t	CO	DE	> 54	443				3D00	).x(x	)
m m	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0	78,0				
12,0	281,0	281,0	202,0	277,0	280,0	280,0	280,0	280,0	280,0	280,0				
14,0		282,0	171,0	237,0	281,0	281,0	281,0	281,0	281,0	281,0				
16,0		283,0	147,0	205,0	263,0	283,0	283,0	283,0	283,0	283,0				
18,0		285,0	128,0	180,0	232,0	284,0	284,0	284,0	284,0	284,0				
20,0		273,0 286,0	113,0 100,0	160,0 143,0	207,0	254,0	272,0	280,0	280,0	280,0 286,0				
22,0 24,0	267,0	286,0	89,0	129,0	186,0 169,0	230,0	258,0 245,0	275,0 271,0	286,0 285,0	286,0				
26,0		268,0	80,0	117,0	154,0	191,0	228,0	253,0	269,0	274,0				
28,0		250,0	72,0	107,0	141,0	176,0	210,0		253,0	263,0				
30,0		233,0	65,0	98,0	130,0	162,0	194,0			251,0				
32,0		215,0	59,0	90,0	120,0	150,0	178,0	201,0	221,0	240,0				
34,0		203,0	54,0	83,0	111,0	140,0	167,0	189,0	209,0	227,0				
36,0		192,0	49,0	76,0	103,0	130,0	156,0	178,0	197,0	215,0				
38,0		180,0	45,0	71,0	96,0	120,0	145,0	167,0	185,0	202,0				
40,0		169,0	41,0	65,0	89,0	112,0	136,0	156,0	174,0	190,0				
44,0 48,0		151,0 137,0	34,5 28,6	56,0 48,0	77,0 67,0	98,0 87,0	119,0 106,0	139,0 125,0	156,0 140,0	171,0 155,0				
52,0		122,0	23,5	42,0	59,0	77,0	95,0	111,0	125,0	139,0				
56,0	100,0	112,0	19,3	36,5	53,0	69,0	85,0	101,0	115,0	128,0				
60,0		102,0	15,7	31,5	47,0	62,0	77,0	92,0	105,0	118,0				
64,0		93,0	12,6	27,6	42,0	56,0	70,0	83,0	96,0	107,0				
68,0	76,0	86,0	10,0	24,0	38,0	51,0	64,0	77,0	89,0	95,0				
72,0		79,0	7,8	21,0	34,0	47,0	59,0	70,0	82,0	84,0				
76,0	64,0	73,0	5,9	18,4	31,0	43,0	54,0	65,0	65,0	65,0				
* n *	18	18	13	18	18	18	18	18	18	18				
	15.0	15.0	10.0	18.0	18.0	18.0	10.0	18.0	18.0	18.0				
уу zz	15.0 300.0	350.0	18.0 0.0	50.0	100.0	150.0	18.0 200.0	250.0	300.0	350.0				
	300.0	330.0	0.0	30.0	100.0	130.0	200.0	230.0	300.0	330.0				
<b>~40</b>														
<b>0</b> - <b>∦0</b>			0.0	0.0	0.0	0.0	0.0		0.0	0.0				
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
	C.	200			حر	<u> </u>	14	1,0 x			1			
	SL	_2DB			I <b>←</b>	<u> </u>	I —							



074548										~ 223				22.00
		l I n	n ><	t	CO	DE	> 54	144	<	V18	31 3	E00	.x(x	()
m m	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0
12,0	186,0	240,0	266,0	266,0	266,0	266,0	266,0	266,0	189,0	251,0	264,0	264,0	264,0	264,0
14,0	157,0	205,0	252,0	268,0	268,0	268,0	268,0	268,0	160,0	214,0	266,0	266,0	266,0	266,0
16,0	135,0	177,0	219,0	259,0	264,0	264,0	264,0	264,0	138,0	186,0	233,0	262,0	266,0	266,0
18,0		156,0	193,0	231,0	260,0	269,0	269,0	269,0	120,0	163,0	206,0	249,0	268,0	268,0
20,0		138,0	172,0	206,0	241,0	265,0	265,0	265,0	106,0	145,0	184,0	223,0	262,0	264,0
22,0	92,0	123,0	155,0	186,0	217,0	246,0	252,0	252,0	94,0	129,0	165,0	201,0	237,0	251,0
24,0	82,0	111,0	140,0	169,0	198,0	227,0	239,0	251,0	83,0	116,0	149,0	182,0	215,0	238,0
26,0	73,0	100,0	127,0	154,0	181,0	208,0	226,0	242,0	75,0	105,0	136,0	167,0	197,0	225,0
28,0	66,0	91,0	116,0	141,0	166,0	191,0	212,0	227,0	67,0	96,0	124,0	153,0	182,0	210,0
30,0		83,0	106,0	130,0	153,0	177,0	198,0	213,0	61,0	87,0	114,0	141,0	168,0	195,0
32,0	54,0 48,5	76,0 69,0	98,0 90,0	120,0 111,0	142,0 132,0	164,0 152,0	183,0 169,0	198,0 183,0	55,0 49,5	80,0 74,0	105,0 97,0	131,0 121,0	156,0 145,0	181,0 166,0
34,0 36,0	44,0	64,0	84,0	103,0	123,0	142,0	158,0	173,0	45,0	68,0	90,0	113,0	136,0	156,0
38,0	40,0	59,0	78,0	96,0	115,0	134,0	149,0	163,0	45,0	62,0	90,0 84,0	105,0	127,0	147,0
40,0	36,0	54,0	72,0	90,0	108,0	125,0	149,0	154,0	37,0	58,0	78,0	99,0	119,0	138,0
44,0		46,0	63,0	79,0	95,0	108,0	122,0	135,0	30,5	49,5	68,0	87,0	103,0	119,0
48,0		39,5	55,0	70,0	84,0	97,0	110,0	122,0	25,3	42,5	60,0	77,0	93,0	107,0
52,0	20,0	34,0	48,0	62,0	75,0	86,0	98,0	110,0	20,7	37,0	53,0	68,0	83,0	96,0
56,0	16,1	29,3	42,5	55,0	66,0	76,0	87,0	98,0	16,8	32,0	46,5	61,0	73,0	85,0
60,0	12,8	25,1	37,5	49,5	60,0	70,0	80,0	90,0	13,5	27,5	41,0	54,0	66,0	78,0
64,0	10,0	21,6	33,0	44,0	53,0	63,0	72,0	82,0	10,5	23,5	36,5	48,5	60,0	71,0
68,0	7,4	18,3	29,2	38,5	47,5	57,0	65,0	74,0	7,9	20,0	32,0	43,0	54,0	64,0
72,0		15,4	25,7	34,5	43,5	52,0	60,0	69,0	5,6	17,1	28,5	39,0	49,0	59,0
76,0		12,9	22,6	31,0	39,0	47,0	55,0	63,0		14,5	25,3	35,0	44,5	53,0
80,0		10,8	20,0	27,7	35,5	43,0	50,0	58,0		12,3	22,5	31,5	40,5	49,0
84,0		9,1	17,8	25,4	32,5	40,0	44,0	47,0		10,5	20,2	29,1	37,5	41,5
* *	40	4.5	47	47	47	47	47	47	40	4.0	47	47	47	47
* n *	12	15	17	17	17	17	17	17	12	16	17	17	17	17
	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
уу zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
	0.0	50.0	100.0	100.0	200.0	200.0	300.0	330.0	0.0	50.0	100.0	100.0	200.0	200.0
o <b>-}•o</b>														
	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
<b> </b>		,-	,-	,-	,-	,-	,-	,-	,-	,-	,-	,-	,-	,-
									Â	<b>A</b>				
	ÇI	2DB				<u> </u>	14	1,0 x	E.A.		1		I	
			l		1			<del>_</del>		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1		I	
	8	4m			15	U	<b>I</b>	,0 <b>,</b> [		У <sub>77 †</sub> ▮	1		I	
	04111						n	n 🌡	yy	m .			II	



074548	48 *** 223										2	22.00			
<b>n</b> A	<b>&gt;</b>		] i n	n ><	t	CO	DE	> 54	144	<	V18	31 (	3E00	.x(x	)
	m	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0	84,0				
	12,0	264,0	264,0	194,0	264,0	264,0	264,0	264,0		264,0	264,0				
	14,0	266,0	266,0	165,0	228,0	265,0	265,0	265,0	265,0	265,0	265,0				
	16,0	266,0	266,0	142,0	198,0	255,0	264,0	265,0	265,0	265,0	265,0				
	18,0	268,0	268,0	124,0	174,0	225,0	264,0	266,0	266,0	266,0	266,0				
	20,0	264,0	264,0	109,0	155,0	201,0	247,0	263,0	264,0	264,0	264,0				
	22,0	259,0		96,0	139,0	181,0	224,0	250,0			267,0				
	24,0	252,0	265,0	86,0	125,0	164,0	203,0	236,0		268,0	268,0				
	26,0	243,0	260,0	77,0	113,0	150,0	186,0	222,0		264,0	265,0				
	28,0	229,0	245,0	69,0	103,0	137,0	171,0	205,0	231,0	249,0	254,0				
	30,0	214,0	230,0	63,0	94,0	126,0	158,0	190,0		235,0	243,0				
	32,0	199,0	215,0	57,0	87,0	117,0	147,0	176,0	201,0	220,0	233,0				
	34,0	184,0		51,0	80,0	108,0	136,0	164,0			222,0				
	36,0	173,0	188,0	46,5	74,0	100,0	127,0	153,0		194,0	211,0				
	38,0	164,0	178,0	42,5	68,0	93,0	119,0	144,0		183,0	200,0				
	40,0	154,0	168,0	38,5	63,0	87,0	111,0	135,0	155,0	173,0	189,0				
	44,0	135,0	149,0	32,0	54,0	76,0	97,0	117,0		153,0	168,0				
	48,0	122,0	135,0	26,6	47,0	66,0	86,0	105,0	123,0	139,0	153,0				
	52,0	110,0	122,0	21,9	41,0	58,0	76,0	94,0		126,0	139,0				
	56,0	98,0	110,0	17,9	35,5	52,0	68,0	84,0	98,0	113,0	126,0				
	60,0	90,0	101,0	14,4	30,5	46,0	61,0	76,0	90,0	104,0	116,0				
	64,0	82,0	92,0	11,3	26,3	41,0	55,0	69,0	82,0	95,0	107,0				
	68,0	74,0	84,0	8,6	22,7	36,5	50,0	62,0	75,0	87,0	97,0				
	72,0	68,0	78,0	6,3	19,5	32,5	45,5	57,0	69,0	78,0	84,0				
	76,0	63,0	72,0		16,8	29,3	41,5	52,0	63,0	70,0	71,0				
	80,0	58,0	63,0		14,5	26,3	37,5	48,0	57,0	59,0	59,0				
	84,0	45,5	46,0		12,6	23,8	33,5	38,0	41,5	41,5	41,5				
* n *	t	17	17	12	17	17	17	17	17	17	17				
уу	/	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
ZZ	<u> </u>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>_{40</b>															
m	/-	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
w	m/s	5,0	5,5	-,0	-,-	-,0	-,0	-,0	-,0	,-	,0				
									<u> </u>	<u> </u>	<u> </u>				
$\overline{}$															
1		1						14	4 O 🕶	W.		1			



074540		Π Λ ΛΙ <del></del>									223				22.00
	<b>?</b>		l n	n ><	t	CO	DE	> 54	145	<	V18	31 3	F00	.x(x	()
	m	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0
	14,0	149,0	195,0	241,0	242,0	242,0	242,0	242,0	242,0	152,0	204,0	236,0	236,0	236,0	236,0
	16,0	128,0	169,0	210,0	238,0	239,0	239,0	239,0	239,0	131,0	177,0	224,0	232,0	232,0	232,0
	18,0	112,0	149,0	185,0 165,0	222,0	236,0	236,0	236,0	236,0	114,0	156,0	198,0	229,0	229,0	229,0
	20,0 22,0	98,0 87,0	132,0 118,0	148,0	199,0 179,0	232,0 210,0	232,0 223,0	232,0 225,0	232,0 225,0	100,0 88,0	138,0 124,0	176,0 159,0	215,0 194,0	225,0 216,0	225,0 221,0
	24,0	77,0	106,0	134,0	163,0	191,0	212,0	220,0	222,0	79,0	111,0	144,0	176,0	205,0	216,0
	26,0	69,0	95,0	122,0	148,0	175,0	201,0	215,0	218,0	70,0	100,0	131,0	161,0	191,0	212,0
	28,0	62,0	86,0	111,0	136,0	161,0	185,0	206,0	211,0	63,0	91,0	119,0	148,0	176,0	204,0
	30,0	55,0	79,0	102,0	125,0	148,0	171,0	193,0	201,0	57,0	83,0	110,0	136,0	163,0	189,0
	32,0	50,0	72,0	94,0	115,0	137,0	159,0	181,0	190,0	51,0	76,0	101,0	126,0	151,0	176,0
	34,0	45,0	66,0	86,0	107,0	128,0	148,0	168,0	179,0	46,0	70,0	93,0	117,0	140,0	164,0
	36,0	40,5	60,0	80,0	99,0	119,0	139,0	156,0	169,0	41,5	64,0	86,0	109,0	131,0	152,0
	38,0	36,5	55,0	74,0	93,0	111,0	130,0	146,0	159,0	37,5	59,0	80,0	101,0	123,0	143,0
	40,0 44,0	33,0 26,8	51,0 43,0	69,0 59,0	86,0 76,0	104,0 92,0	122,0 107,0	137,0 121,0	151,0 134,0	34,0 27,7	54,0 46,5	75,0 65,0	95,0 83,0	115,0 102,0	135,0 119,0
	44,0 48,0	20,8	43,0 36,5	59,0 52,0	67,0	92,0 81,0	94,0	106,0	134,0	22,5	46,5 39,5	57,0	74,0	90,0	104,0
	52,0	17,3	31,0	45,0	59,0	73,0	85,0	96,0	108,0	18,0	34,0	50,0	66,0	81,0	94,0
	56,0	13,5	26,5	39,5	53,0	65,0	75,0	86,0	97,0	14,2	29,0	44,0	59,0	72,0	84,0
	60,0	10,3	22,5	34,5	46,5	57,0	67,0	77,0	87,0	10,9	24,8	38,5	52,0	63,0	75,0
	64,0	7,5	19,0	30,5	42,0	51,0	61,0	70,0	80,0	8,1	21,2	34,5	47,0	58,0	69,0
	68,0	5,1	15,9	26,8	37,0	46,0	55,0	64,0	73,0	5,6	18,0	30,5	41,5	52,0	62,0
	72,0		13,2	23,5	32,5	41,0	49,0	57,0	66,0		15,2	26,6	36,5	46,5	56,0
	76,0		10,9	20,7	29,0	37,0	45,0	53,0	61,0		12,6	23,4	33,0	42,5	52,0
	80,0		8,9	18,0	25,6	33,5	41,0	48,5	56,0		10,3	20,6	29,6	38,5	47,5
	84,0		7,0 5,4	15,7 13,7	22,5 20,1	29,9 27,3	37,5 34,5	44,5 41,0	52,0 47,5		8,4 6,7	18,0 16,0	26,3 23,7	35,0 32,0	43,0 39,0
	88,0		5,4	13,1	20,1	21,3	34,3	41,0	47,5		0,7	10,0	23,1	32,0	39,0
		_													
* n	^	9	12	15	15	15	15	15	15	9	13	15	15	15	15
.,	v	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
y z		0.0	50.0		150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
	-	0.0	55.5	100.0	100.0	200.0	200.0	550.0	550.0	0.0	55.0	100.0	100.0	200.0	200.0
~ d^															
0 <b>-40</b>															
	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
	_	_						_							
		<u> </u>	000			ء		14	1,0 x	<b>W</b>				II	
		SL	.2DB					T	<u> </u>						
	90m						60	14	,0		V <sub>77 t</sub>				
						t		n	1	уу	m J				
		•				<u> </u>		<b>\</b>		"		<u> </u>		<u> </u>	



074548									**	* 223				22.00
		] i n	n ><	t	CO	DE	> 54	445	<	V18	31 :	3F00	.x(x	)
m m	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0				
14,0	236,0	236,0	156,0	218,0	228,0	228,0	228,0	228,0	228,0	228,0				
16,0	232,0	232,0	134,0	189,0	225,0	225,0	225,0	225,0	225,0	225,0				
18,0	229,0	229,0	117,0	167,0	217,0	221,0	221,0	221,0	221,0	221,0				
20,0	225,0	225,0	103,0	148,0	194,0	217,0	218,0	218,0	218,0	218,0				
22,0 24,0	221,0 217,0	221,0 217,0	91,0 81,0	133,0 120,0	174,0 158,0	208,0 196,0	214,0 211,0	214,0 211,0	214,0 211,0	214,0 211,0				
26,0	214,0	214,0	73,0	108,0	144,0	180,0	207,0	207,0	207,0	207,0				
28,0	207,0	207,0	65,0	99,0	132,0	165,0	199,0	201,0	201,0					
30,0	197,0	201,0	59,0	90,0	121,0	153,0	184,0	193,0	198,0	198,0				
32,0	187,0	195,0	53,0	82,0	112,0	142,0	171,0		194,0					
34,0	178,0	188,0	48,0	76,0	104,0	132,0	160,0	177,0	190,0	190,0				
36,0	168,0	182,0	43,5	70,0	96,0	123,0	149,0	169,0	186,0	186,0				
38,0	159,0	174,0	39,0	64,0	90,0	115,0	140,0	161,0	179,0	180,0				
40,0	151,0	165,0	35,5	60,0	84,0	108,0	132,0	152,0	170,0	174,0				
44,0	134,0	148,0	29,1	51,0	73,0	95,0	116,0	135,0	152,0	162,0				
48,0	118,0	131,0	23,7	44,0	64,0	84,0	102,0	119,0	135,0	150,0				
52,0	107,0	120,0	19,2	38,0	57,0	74,0	92,0	108,0	124,0	137,0				
56,0	97,0	109,0	15,3	33,0	50,0	66,0	82,0	98,0	112,0	125,0				
60,0	86,0	98,0	11,9	28,4	44,5	59,0	74,0	87,0	101,0	113,0				
64,0	80,0	90,0	9,0 6,5	24,4	39,5	54,0 48,5	67,0	80,0	93,0	105,0				
68,0 72,0	73,0 66,0	83,0 75,0	6,5	20,8 17,7	35,0	43,5	61,0 55,0	73,0 66,0	86,0 78,0	97,0 89,0				
76,0	61,0	70,0		14,9	31,0 27,4	39,5	50,0	61,0	72,0	82,0				
70,0 80,0	56,0	65,0		12,5	24,4	35,5	46,0	56,0	67,0	75,0				
84,0	51,0	60,0		10,5	21,7	32,0	42,0	52,0	62,0	67,0				
88,0	46,5	53,0		8,7	19,4	28,4	37,0	45,5	54,0	54,0				
•	,			,	,		,	,	,					
* n *	15	15	10	14	14	14	14	14	14	14				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>-</b> ∦ <b>o</b>														
m	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>Ш</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
										,				
					ء ا		1/	1 0 37	<b>1</b>					

SL2DB 90m



0745	70										^ 223				22.00
			l I n	n ><	t	CO	DE	> 54	446	<	V18	31 4	000	.x(x	()
	m	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0
	14,0	143,0	188,0	229,0	229,0	229,0	229,0	229,0	229,0	146,0	197,0	225,0	225,0	225,0	225,0
	16,0	123,0	163,0	203,0	228,0	228,0	228,0	228,0	228,0	125,0	171,0	216,0	223,0	223,0	223,0
	18,0	107,0	143,0	179,0	215,0	224,0	226,0	226,0	226,0	109,0	150,0	191,0	218,0	221,0	221,0
	20,0	94,0	127,0	160,0	193,0	220,0	224,0	224,0	224,0	96,0	133,0	171,0	208,0	219,0	219,0
	22,0	83,0	113,0	143,0	174,0 158,0	204,0	220,0	220,0	220,0	85,0	119,0	154,0	188,0	215,0	215,0
	24,0 26,0	74,0 66,0	102,0 92,0	130,0 118,0	144,0	186,0 170,0	208,0 196,0	213,0 205,0	213,0 213,0	75,0 67,0	107,0 97,0	139,0 126,0	171,0 156,0	203,0 186,0	209,0 202,0
	28,0	59,0	83,0	107,0	132,0	156,0	180,0	198,0	209,0	60,0	88,0	115,0	143,0	171,0	196,0
	30,0	52,0	75,0	98,0	121,0	144,0	167,0	188,0	201,0	54,0	80,0	106,0	132,0	158,0	184,0
	32,0	47,0	69,0	90,0	112,0	133,0	155,0	177,0	190,0	48,0	73,0	97,0	122,0	147,0	171,0
	34,0	42,0	63,0	83,0	103,0	124,0	144,0	165,0	179,0	43,5	67,0	90,0	113,0	136,0	160,0
	36,0	38,0	57,0	77,0	96,0	115,0	135,0	154,0	167,0	39,0	61,0	83,0	105,0	127,0	149,0
	38,0	34,0	52,0	71,0	89,0	108,0	126,0	142,0	156,0	35,0	56,0	77,0	98,0	119,0	140,0
	40,0	30,5	48,0	66,0	83,0	101,0	118,0	133,0	147,0	31,5	51,0	72,0	92,0	112,0	131,0
	44,0	24,3	40,5	57,0	73,0	89,0	105,0	119,0	132,0	25,2	43,5	62,0	80,0	99,0	117,0
	48,0	19,2	34,0	49,0	64,0	79,0	92,0	105,0	117,0	20,0	37,0	54,0	71,0	88,0	103,0
	52,0	14,8	28,6	42,5	56,0	70,0	81,0	93,0	105,0	15,6	31,5	47,0	63,0	78,0	91,0
	56,0	11,1	24,0	37,0	49,5	63,0	73,0	84,0	95,0	11,8	26,5	41,0	56,0	70,0	82,0
	60,0	7,9	20,0	32,0	44,0	55,0	65,0	76,0	85,0	8,5	22,3	36,0	50,0	62,0	74,0
	64,0 68,0	5,1	16,4 13,4	27,8 24,1	39,0 35,0	49,0 44,0	58,0 53,0	68,0 62,0	77,0 71,0	5,7	18,6 15,4	31,5 27,7	44,0 39,5	55,0 50,0	66,0 60,0
	72,0		10,6	20,9	30,5	39,5	47,5	56,0	64,0		12,6	24,3	35,0	45,0	55,0
	76,0		8,3	18,0	26,3	34,5	42,5	50,0	58,0		10,1	20,9	30,5	40,0	49,0
	80,0		6,2	15,4	23,3	31,0	38,5	46,0	54,0		8,0	18,4	27,1	36,0	45,0
	84,0		0,2	13,2	20,5	27,7	35,0	42,0	49,5		6,1	16,0	23,9	32,5	41,0
	88,0			11,3	17,7	24,3	31,5	38,5	45,0		-,	13,7	20,8	29,0	37,0
	92,0			9,5	15,9	21,7	28,5	35,0	42,0			11,7	18,7	26,2	34,0
	96,0			8,0	14,6	20,0	25,5	28,0	30,5			10,1	17,3	20,7	23,5
-	n *	9	12	14	14	14	14	14	14	9	12	14	14	14	14
	уу —	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
	zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
	T														
	_														
0-40															
			00	00	00	0.0	0.0	0.0			0.0	0.0		0.0	
₩	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
L													<u> </u>		
											<b>A</b>				
		SI	2DB					_ 14	1,0 X	No.				l	
1						15	0	14	$^{\circ}$			1		I	
1	96m							▲ '4	,,,	<b>—</b>	yzz t	1		I	
		_				t		n		уу	m			<u> </u>	



074548									**	* 223				22.00
		]   r	n ><	t	CO	DE	> 54	446	<	V18	31	4000	.x(x	)
m m	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0				
14,0	225,0	225,0	149,0	210,0	219,0	219,0	219,0	219,0	219,0	219,0				
16,0			129,0	183,0	217,0		217,0			217,0				
18,0		221,0	112,0	161,0	210,0	215,0	215,0		215,0	215,0				
20,0		219,0	99,0	143,0	188,0	213,0	213,0		213,0	213,0				
22,0	215,0	215,0	87,0	128,0	169,0	210,0	210,0	210,0	210,0	210,0				
24,0		209,0	78,0	115,0	153,0	191,0	205,0	208,0	208,0	208,0				
26,0		212,0 209,0	69,0	104,0	140,0	175,0 161,0	199,0	206,0	206,0 203,0	206,0 203,0				
28,0 30,0			62,0 56,0	95,0 87,0	128,0 118,0	148,0	194,0 179,0	203,0 196,0	198,0	198,0				
30,0 32,0		194,0	50,0	79,0	108,0	138,0	167,0	186,0	191,0	191,0				
34,0	179,0	186,0	45,0	73,0	100,0	128,0	155,0	177,0	185,0	193,0				
36,0		177,0	40,5	67,0	93,0	119,0	145,0	167,0	179,0	190,0				
38,0		169,0	36,5	61,0	86,0	111,0	136,0	157,0	173,0	186,0				
40,0		161,0	33,0	57,0	80,0	104,0	128,0		166,0	180,0				
44,0		146,0	26,6	48,5	70,0	92,0	114,0	133,0	150,0	164,0				
48,0		130,0	21,3	41,5	61,0	81,0	101,0	118,0	134,0	148,0				
52,0	104,0	117,0	16,7	35,5	54,0	73,0	89,0	105,0	121,0	134,0				
56,0	95,0	107,0	12,9	30,5	47,5	65,0	81,0	96,0	110,0	123,0				
60,0	85,0	97,0	9,5	25,8	42,0	58,0	72,0	86,0	100,0	112,0				
64,0		87,0	6,6	22,0	37,5	51,0	64,0	77,0	90,0	102,0				
68,0	70,0	81,0		18,6	33,0	46,5	59,0	71,0	83,0	95,0				
72,0	64,0	74,0		15,6	29,0	41,5	53,0	65,0	76,0	88,0				
76,0	58,0	67,0		13,0	25,4	36,5	48,0	59,0	70,0	80,0				
80,0	54,0	62,0		10,5	22,4	33,0	44,0	54,0	65,0	74,0				
84,0		58,0		8,4	19,6	29,7	40,0	50,0	60,0	69,0				
88,0		53,0		6,4	17,0	26,3	36,0	45,5	55,0	63,0				
92,0		49,0			15,0	23,6	33,0	42,0	51,0	54,0				
96,0	26,5	29,2												
* n *	14	14	9	13	14	14	14	14	14	14				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	-													
<u>~40</u>														
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
							_	_						
				Ĭ	T			1	No.	AD.	1			



074548									**	* 223				22.00
	MM	]   n	n ><	t	CO	DE	> 54	147	<	V18	31 4	100	.x(x	)
m m	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0
14,0	138,0	181,0	210,0	210,0	210,0	210,0	210,0	210,0	140,0	190,0	206,0	206,0	206,0	206,0
16,0	119,0	158,0	197,0	208,0	208,0	208,0	208,0	208,0	121,0	166,0	205,0	205,0	205,0	205,0
18,0	103,0 91,0	139,0 123,0	174,0 155,0	204,0 188,0	206,0 204,0	206,0 204,0	206,0 204,0	206,0 204,0	105,0	146,0 129,0	186,0 166,0	202,0	203,0 201,0	203,0 201,0
20,0 22,0	80,0	110,0	139,0	169,0	199,0	202,0	202,0	202,0	93,0 82,0	116,0	149,0	199,0 183,0	198,0	198,0
24,0	71,0	98,0	126,0	154,0	181,0	196,0	198,0	198,0	72,0	104,0	135,0	167,0	192,0	195,0
26,0	63,0	89,0	114,0	140,0	166,0	187,0	192,0	197,0	65,0	94,0	123,0	152,0	182,0	190,0
28,0	56,0	80,0	104,0	128,0	152,0	176,0	187,0	195,0	58,0	85,0	112,0	140,0	167,0	185,0
30,0	50,0	73,0	95,0	118,0	141,0	163,0	182,0	192,0	52,0	77,0	103,0	129,0	155,0	180,0
32,0	45,0	66,0	88,0	109,0	130,0	152,0	173,0	184,0	46,0	70,0	95,0	119,0	143,0	168,0
34,0	40,0	60,0	81,0	101,0	121,0	141,0	161,0	174,0	41,5	64,0	87,0	110,0	133,0	156,0
36,0	36,0	55,0	74,0	93,0	113,0	132,0	151,0	165,0	37,0	59,0	81,0	103,0	124,0	146,0
38,0	32,0	50,0	69,0	87,0	105,0	123,0	142,0	155,0	33,0	54,0	75,0	96,0	116,0	137,0
40,0	28,7	46,0	63,0	81,0	98,0	116,0	132,0	146,0	29,7	49,5	69,0	89,0	109,0	129,0
44,0 48,0	22,7 17,6	38,5 32,5	55,0 47,0	70,0 62,0	86,0 76,0	102,0 91,0	117,0 104,0	130,0 117,0	23,5 18,4	41,5 35,0	60,0 52,0	78,0 69,0	96,0 86,0	114,0 102,0
52,0	13,3	27,0	40,5	54,0	68,0	80,0	91,0	103,0	14,0	29,6	45,0	61,0	76,0	90,0
56,0	9,6	22,3	35,0	48,0	61,0	72,0	82,0	93,0	10,3	24,8	39,5	54,0	68,0	81,0
60,0	6,4	18,3	30,5	42,5	54,0	65,0	75,0	85,0	7,0	20,7	34,5	48,0	61,0	73,0
64,0	-, :	14,9	26,1	37,5	48,0	57,0	67,0	76,0	,,,,	17,0	29,9	43,0	54,0	65,0
68,0		11,8	22,5	33,0	42,0	51,0	60,0	69,0		13,9	26,0	37,5	48,0	58,0
72,0		9,1	19,2	29,2	38,0	46,5	55,0	63,0		11,0	22,6	33,5	43,5	53,0
76,0		6,7	16,3	25,3	33,5	42,0	50,0	58,0		8,5	19,5	29,6	39,0	48,5
80,0			13,7	21,5	29,4	37,0	44,5	52,0		6,3	16,8	25,5	34,5	43,5
84,0			11,5	18,8	26,1	33,5	41,0	48,0			14,4	22,6	31,0	39,5
88,0			9,5	16,7	23,3	30,5	37,5	44,0			12,3	20,1	27,9	36,0
92,0			7,7	14,5	20,4	27,0	34,0	40,5			10,4	17,5	24,7	32,5
96,0 100,0			6,3 5,1	12,7 11,4	18,2 16,6	24,2 22,0	31,0 28,3	37,0 33,5			8,7 7,2	15,5 14,0	22,0 19,9	29,5 25,8
100,0			3,1	11,-	10,0	22,0	20,0	00,0			7,2	14,0	13,3	20,0
* n *	9	11	13	13	13	13	13	13	9	12	13	13	13	13
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0



074548									**	* 223			22.00
		]   r	n ><	t	CO	DE	> 54	447			4100	.x(x	)
m m	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0	102,0			
14,0	206,0	206,0	144,0	203,0	203,0	203,0	203,0	203,0	203,0	203,0			
16,0	205,0	205,0	124,0	177,0	200,0		200,0	200,0	200,0	200,0			
18,0 20,0	203,0 201,0	203,0 201,0	108,0 95,0	156,0 139,0	197,0 183,0	198,0 196,0	198,0 196,0	198,0 196,0	198,0 196,0	198,0 196,0			
22,0	198,0	198,0	84,0	124,0	165,0	194,0	194,0	194,0	194,0	194,0			
24,0	195,0	195,0	75,0	112,0	149,0	186,0	191,0	191,0	191,0	191,0			
26,0	194,0	194,0	67,0	101,0	136,0	171,0	187,0	189,0	189,0	189,0			
28,0	191,0		60,0	92,0	125,0	157,0	183,0	187,0	187,0	187,0			
30,0	189,0	189,0	53,0	84,0	114,0	145,0	176,0	184,0	184,0	184,0			
32,0	181,0		48,0	77,0	106,0		163,0			179,0			
34,0 36,0	172,0 163,0	176,0 170,0	43,0 38,5	70,0 65,0	98,0 90,0	125,0 116,0	152,0 142,0	169,0 161,0	175,0 170,0	178,0 176,0			
38,0	154,0	164,0	34,5	59,0	84,0	109,0	133,0	154,0	165,0	173,0			
40,0	145,0	157,0	31,0	55,0	78,0	102,0	125,0	146,0	160,0	170,0			
44,0	130,0	144,0	24,9	46,5	68,0	90,0	111,0	131,0	148,0	159,0			
48,0	116,0	130,0	19,6	39,5	59,0	79,0	99,0	117,0	133,0	145,0			
52,0	103,0	116,0	15,2	33,5	52,0	71,0	88,0	104,0	119,0	132,0			
56,0	93,0	105,0	11,3	28,6	46,0	63,0	79,0	94,0	109,0	121,0			
60,0 64,0	84,0 76,0	96,0 87,0	8,0 5,1	24,2 20,4	40,5 35,5	57,0 51,0	71,0 64,0	85,0 77,0	99,0 90,0	112,0 102,0			
68,0	68,0	79,0	5,1	17,0	31,5	44,5	57,0	69,0	81,0	93,0			
72,0	63,0	73,0		14,0	27,7	40,5	52,0	64,0	75,0	86,0			
76,0	57,0	67,0		11,4	24,4	36,0	47,0	58,0		80,0			
80,0	52,0	61,0		9,0	20,7	31,5	42,0	53,0	63,0	73,0			
84,0	47,5	56,0		7,0	18,1	28,2	38,5	48,5	58,0	68,0			
88,0	44,0	52,0		5,1	16,0	25,1	35,0	44,5	54,0	63,0			
92,0	40,5	47,5			13,8	22,1	31,5	40,5	49,5	58,0			
96,0 100,0	37,0 31,5	44,0 37,0			11,9 10,2	19,7 16,7	28,5 23,2	37,5 29,9	46,0 36,5	51,0 37,5			
100,0	01,0	07,0			10,2	10,7	20,2	20,0	00,0	07,0			
+ +	40	40	_	40	40	40	40	40	40	40			
* n *	13	13	9	13	13	13	13	13	13	13			
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0			
zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0			
o <b>_∤o</b>													
l I m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0			
,3													
							_						
					ء ا	. 1	12	10 v 1					
	SI	_2DB				<b>→</b>	l ——	., o x					

102m



074546	Π Λ Δ	•								223				22.00
		i r	n ><	t	CO	DE	> 54	448	<	V18	31 4	200	.x(x	()
m m	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0
16,0	115,0	153,0	190,0	190,0	190,0	190,0	190,0	190,0	117,0	160,0	189,0	189,0	189,0	189,0
18,0 20,0	100,0 88,0	135,0 119,0	169,0 151,0	189,0 182,0	189,0 187,0	189,0 187,0	189,0 187,0	189,0 187,0	102,0 89,0	141,0 126,0	181,0 162,0	188,0 185,0	188,0 187,0	188,0 187,0
22,0	77,0	107,0	136,0	165,0	185,0	185,0	185,0	185,0	79,0	112,0	146,0	179,0	186,0	186,0
24,0	68,0	96,0	123,0	150,0	177,0	183,0	183,0	183,0	70,0	101,0	132,0	163,0	185,0	185,0
26,0	61,0	86,0	111,0	137,0	162,0	175,0	179,0	179,0	62,0	91,0	120,0	149,0	175,0	180,0
28,0	54,0	78,0	102,0	125,0	149,0	168,0	175,0	177,0	56,0	83,0	110,0	137,0	164,0	175,0
30,0	48,5	71,0	93,0	115,0	138,0	160,0	172,0	174,0	49,5	75,0	100,0	126,0	151,0	171,0
32,0	43,0	64,0 58,0	85,0	106,0	127,0	148,0 138,0	168,0 158,0	170,0	44,5 39,5	68,0	92,0 85,0	116,0 108,0	140,0 131,0	164,0 153,0
34,0 36,0	38,5 34,5	53,0	78,0 72,0	98,0 91,0	118,0 110,0	129,0	148,0	163,0 156,0	35,5	62,0 57,0	79,0	100,0	122,0	143,0
38,0	30,5	48,5	67,0	85,0	103,0	121,0	139,0	149,0	31,5	52,0	73,0	93,0	114,0	134,0
40,0	27,2	44,5	62,0	79,0	96,0	113,0	131,0	141,0	28,1	48,0	67,0	87,0	107,0	126,0
44,0	21,2	37,0	53,0	69,0	84,0	100,0	114,0	127,0	22,1	40,0	58,0	76,0	94,0	112,0
48,0	16,2	31,0	45,5	60,0	75,0	89,0	103,0	115,0	17,0	33,5	50,0	67,0	84,0	100,0
52,0	11,9	25,5 20,9	39,0	53,0	66,0	80,0 70,0	91,0	103,0	12,7 9,0	28,2 23,4	43,5	59,0 52,0	74,0 66,0	89,0 78,0
56,0 60,0	8,3 5,1	17,0	33,5 28,8	46,5 40,5	59,0 53,0	63,0	80,0 73,0	91,0 83,0	9,0 5,7	19,3	38,0 33,0	46,5	60,0	76,0
64,0	0,1	13,5	24,7	36,0	47,0	57,0	66,0	76,0	0,7	15,6	28,4	41,0	53,0	64,0
68,0		10,4	21,0	31,5	41,5	50,0	59,0	68,0		12,5	24,5	36,5	47,5	57,0
72,0		7,7	17,7	27,6	36,5	44,5	53,0	61,0		9,6	21,1	32,0	42,0	52,0
76,0		5,2	14,8	24,3	32,5	40,5	48,5	56,0		7,1	18,0	28,4	38,0	47,0
80,0			12,2	21,0	28,5	36,0	44,0	52,0			15,2	24,8	33,5	42,5
84,0 88,0			9,9 7,8	17,7 15,2	24,6 21,6	32,0 28,5	39,5 35,5	47,0 42,5			12,8 10,6	21,1 18,3	29,6 26,2	38,0 34,5
92,0			5,9	13,4	19,3	25,6	32,5	39,0			8,6	16,2	23,5	31,0
96,0			,-	11,5	17,0	22,7	29,3	35,5			6,9	14,2	20,7	28,1
100,0				9,8	14,8	20,0	26,3	32,5			5,4	12,3	18,2	25,1
104,0				8,4	13,2	18,2	23,8	29,9				10,8	16,5	22,7
108,0				7,5	12,2	15,6	17,4	19,4						
* n *	7	9	12	12	12	12	12	12	7	10	12	12	12	12
уу —	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
o <b>_∦o</b>														
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
									No.	AD.				
		_2DB )8m			15	50	14	1,0 X						
	10	,0111				- 1			<b>I</b> ← → Ì	zz t	1			



16,0 18,0 20,0 22,0 24,0 26,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0	189,0 188,0 187,0 186,0 185,0 180,0 179,0 176,0 157,0 150,0 142,0 115,0 103,0 91,0	108,0 189,0 188,0 187,0 186,0 185,0 179,0 176,0 173,0 168,0 162,0 157,0 152,0 141,0 128,0	m > < 108,0 120,0 105,0 92,0 82,0 72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0 29,6	172,0 152,0 135,0 121,0 109,0 99,0 90,0 82,0 75,0 68,0 63,0	108,0 186,0 178,0 161,0 146,0 133,0 122,0 112,0 103,0 95,0	108,0 186,0 184,0 183,0 182,0 167,0 154,0 142,0	108,0 186,0 186,0 184,0 183,0 182,0 177,0 173,0 169,0	108,0 186,0 184,0 183,0 182,0 180,0 178,0	108,0 186,0 184,0 183,0 182,0 180,0 178,0	108,0 186,0 184,0 183,0 182,0 180,0	31 4	-200	.x(x	)
16,0 18,0 20,0 22,0 24,0 26,0 28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 48,0 52,0	189,0 188,0 187,0 186,0 185,0 180,0 179,0 176,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	189,0 188,0 187,0 186,0 185,0 189,0 179,0 176,0 168,0 162,0 157,0 141,0	120,0 105,0 92,0 82,0 72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0	172,0 152,0 135,0 121,0 109,0 99,0 90,0 82,0 75,0 68,0 63,0	186,0 186,0 178,0 161,0 146,0 133,0 122,0 112,0 103,0 95,0	186,0 186,0 184,0 183,0 182,0 167,0 154,0 142,0	186,0 186,0 184,0 183,0 182,0 177,0 173,0 169,0	186,0 186,0 184,0 183,0 182,0 180,0	186,0 186,0 184,0 183,0 182,0 180,0	186,0 186,0 184,0 183,0 182,0 180,0				
18,0 20,0 22,0 24,0 26,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 52,0	188,0 187,0 186,0 185,0 180,0 179,0 176,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	188,0 187,0 186,0 185,0 179,0 176,0 173,0 168,0 162,0 157,0 152,0 141,0	105,0 92,0 82,0 72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0	152,0 135,0 121,0 109,0 99,0 90,0 82,0 75,0 68,0 63,0	186,0 178,0 161,0 146,0 133,0 122,0 112,0 103,0 95,0	186,0 184,0 183,0 182,0 167,0 154,0 142,0 131,0	186,0 184,0 183,0 182,0 177,0 173,0 169,0	186,0 184,0 183,0 182,0 180,0	186,0 184,0 183,0 182,0 180,0	186,0 184,0 183,0 182,0 180,0				
20,0 22,0 24,0 26,0 28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 52,0	187,0 186,0 185,0 180,0 179,0 176,0 157,0 150,0 142,0 115,0 103,0 91,0	187,0 186,0 185,0 180,0 179,0 176,0 173,0 168,0 162,0 157,0 152,0 141,0	92,0 82,0 72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0	135,0 121,0 109,0 99,0 90,0 82,0 75,0 68,0 63,0	178,0 161,0 146,0 133,0 122,0 112,0 103,0 95,0	184,0 183,0 182,0 167,0 154,0 142,0 131,0	184,0 183,0 182,0 177,0 173,0 169,0	184,0 183,0 182,0 180,0 178,0	184,0 183,0 182,0 180,0	184,0 183,0 182,0 180,0				
22,0 24,0 26,0 28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 52,0	186,0 185,0 180,0 179,0 176,0 173,0 165,0 157,0 150,0 142,0 115,0 103,0 91,0	186,0 185,0 180,0 179,0 176,0 173,0 168,0 157,0 152,0 141,0	82,0 72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0	121,0 109,0 99,0 90,0 82,0 75,0 68,0 63,0	161,0 146,0 133,0 122,0 112,0 103,0 95,0	183,0 182,0 167,0 154,0 142,0 131,0	183,0 182,0 177,0 173,0 169,0	183,0 182,0 180,0 178,0	183,0 182,0 180,0	183,0 182,0 180,0				
24,0 26,0 28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 52,0	185,0 180,0 179,0 176,0 173,0 165,0 157,0 142,0 127,0 115,0 103,0 91,0	185,0 180,0 179,0 176,0 173,0 168,0 157,0 152,0 141,0	72,0 64,0 58,0 52,0 46,0 41,5 37,0 33,0	109,0 99,0 90,0 82,0 75,0 68,0 63,0	146,0 133,0 122,0 112,0 103,0 95,0	182,0 167,0 154,0 142,0 131,0	182,0 177,0 173,0 169,0	182,0 180,0 178,0	182,0 180,0	182,0 180,0				
26,0 28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 48,0 52,0	180,0 179,0 176,0 173,0 165,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	180,0 179,0 176,0 173,0 168,0 162,0 157,0 152,0 141,0	64,0 58,0 52,0 46,0 41,5 37,0 33,0	99,0 90,0 82,0 75,0 68,0 63,0	133,0 122,0 112,0 103,0 95,0	167,0 154,0 142,0 131,0	177,0 173,0 169,0	180,0 178,0	180,0	180,0				
28,0 30,0 32,0 34,0 36,0 38,0 40,0 44,0 48,0 52,0	179,0 176,0 173,0 165,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	179,0 176,0 173,0 168,0 162,0 157,0 152,0 141,0	58,0 52,0 46,0 41,5 37,0 33,0	90,0 82,0 75,0 68,0 63,0	122,0 112,0 103,0 95,0	154,0 142,0 131,0	173,0 169,0	178,0						
30,0 32,0 34,0 36,0 38,0 40,0 44,0 48,0 52,0	176,0 173,0 165,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	176,0 173,0 168,0 162,0 157,0 152,0 141,0	52,0 46,0 41,5 37,0 33,0	82,0 75,0 68,0 63,0	112,0 103,0 95,0	142,0 131,0	169,0		178 ∩	4=0				
32,0 34,0 36,0 38,0 40,0 44,0 48,0 52,0	173,0 165,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	173,0 168,0 162,0 157,0 152,0 141,0	46,0 41,5 37,0 33,0	75,0 68,0 63,0	103,0 95,0	131,0				178,0				
34,0 36,0 38,0 40,0 44,0 48,0 52,0	165,0 157,0 150,0 142,0 127,0 115,0 103,0 91,0	168,0 162,0 157,0 152,0 141,0	41,5 37,0 33,0	68,0 63,0	95,0			176,0	176,0	176,0				
36,0 38,0 40,0 44,0 48,0 52,0	157,0 150,0 142,0 127,0 115,0 103,0 91,0	162,0 157,0 152,0 141,0	37,0 33,0	63,0			160,0	174,0	174,0	174,0				
38,0 40,0 44,0 48,0 52,0	150,0 142,0 127,0 115,0 103,0 91,0	157,0 152,0 141,0	33,0			122,0	149,0	166,0	169,0	169,0				
40,0 44,0 48,0 52,0	142,0 127,0 115,0 103,0 91,0	152,0 141,0			88,0	114,0	139,0	159,0	164,0	166,0				
44,0 48,0 52,0	127,0 115,0 103,0 91,0	141,0	29,6	58,0	82,0	106,0			160,0	162,0				
48,0 52,0	115,0 103,0 91,0			53,0	76,0	99,0	123,0	143,0	155,0	158,0				
52,0	103,0 91,0	128.01	23,5	45,0	66,0	87,0	109,0	128,0	145,0	150,0				
	91,0		18,3	38,0	58,0	77,0	97,0	116,0	132,0	140,0				
56.0		115,0	13,8	32,0	50,0	69,0	87,0	104,0	119,0	129,0				
	000	103,0	10,0	27,1	44,0	61,0	77,0	91,0	106,0	119,0				
60,0	83,0	94,0	6,7	22,8	39,0	55,0	70,0	84,0	97,0	110,0				
64,0	75,0	86,0		18,9	34,0	49,0	63,0	76,0	89,0	101,0				
68,0	68,0	78,0		15,6	29,9	44,0	56,0	68,0	81,0	92,0				
72,0	61,0	71,0		12,6	26,1	38,5	50,0	62,0	73,0	85,0				
76,0	56,0	65,0		9,9	22,8	34,5	46,0	57,0	68,0	79,0				
80,0	51,0	60,0		7,5	19,8	30,5	41,5	52,0	62,0	73,0				
84,0	46,5	55,0 50,0		5,4	17,1	26,7	37,0	47,0	57,0 52,0	67,0				
88,0 92,0	42,5 39,0	46,5			14,7 12,7	23,6 21,1	33,5 30,0	43,0 39,5	48,5	62,0 58,0				
96,0	35,5	43,0			10,6	18,6	27,2	36,0	45,0	53,0				
100,0	32,5	39,5			8,8	16,3	24,2	33,0	41,5	48,5				
100,0	29,7	36,5			7,1	14,7	21,8	30,0	38,5	41,5				
108,0	23,1	30,3			7,1	17,7	21,0	30,0	30,3	71,5				
* n *	12	12	7	11	12	12	12	12	12	12				
\n.	15.0	15.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0				
	15.0 300.0	15.0 350.0	18.0 0.0	18.0 50.0	18.0 100.0	18.0 150.0	18.0 200.0	18.0 250.0	18.0 300.0	18.0 350.0		+		
zz3	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
-														
+														
<b>-</b> 40														
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
											_			



074548									**	* 223				22.00
		] i r	n ><	t	CO	DE	> 54	449	<	V18	31 4	300	.x(x	)
m m	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0
16,0	111,0	149,0	166,0	166,0	166,0	166,0	166,0	166,0	113,0	156,0	165,0	165,0	165,0	165,0
18,0	97,0	131,0	165,0	165,0	165,0	165,0	165,0	165,0	99,0	138,0	165,0	165,0	165,0	165,0
20,0	85,0	116,0	147,0	162,0	163,0	163,0	163,0	163,0	87,0	122,0	158,0	163,0	163,0	163,0
22,0	75,0	104,0	133,0	160,0	162,0	162,0	162,0	162,0	77,0	110,0	142,0	162,0	162,0	162,0
24,0	67,0	93,0	120,0	147,0	160,0	160,0	160,0	160,0	68,0	99,0	129,0	159,0	161,0	161,0
26,0	59,0	84,0	109,0	134,0	156,0	157,0	157,0	157,0	61,0	89,0	117,0	146,0	158,0	159,0
28,0 30,0	53,0 47,0	76,0 69,0	99,0 91,0	123,0 113,0	146,0 135,0	153,0 149,0	156,0 155,0	156,0 155,0	54,0 48,0	81,0 73,0	107,0 98,0	134,0 123,0	152,0 147,0	158,0 157,0
32,0	42,0	63,0	83,0	104,0	125,0	145,0	153,0	153,0	43,0	67,0	90,0	114,0	138,0	155,0
34,0	37,5	57,0	77,0	96,0	116,0	136,0	150,0	150,0	38,5	61,0	83,0	106,0	128,0	151,0
36,0	33,0	52,0	71,0	89,0	108,0	127,0	143,0	144,0	34,5	56,0	77,0	98,0	120,0	141,0
38,0	29,5	47,5	65,0	83,0	101,0	119,0	135,0	139,0	30,5	51,0	71,0	92,0	112,0	132,0
40,0	26,2	43,0	60,0	77,0	94,0	111,0	128,0	134,0	27,1	46,5	66,0	85,0	105,0	124,0
44,0	20,3	36,0	52,0	67,0	83,0	99,0	113,0	124,0	21,2	39,0	57,0	75,0	92,0	110,0
48,0	15,4	29,8	44,5	59,0	73,0	88,0	101,0	113,0	16,2	32,5	49,0	66,0	82,0	99,0
52,0	11,1	24,6	38,0	51,0	65,0	78,0	91,0	102,0	11,9	27,2	42,5	58,0	73,0	88,0
56,0	7,5	20,0	32,5	45,0	58,0	70,0	81,0	91,0	8,2	22,5	37,0	51,0	65,0	79,0
60,0		16,1	27,9	39,5	51,0	61,0	72,0	81,0		18,4	32,0	45,5	58,0	70,0
64,0		12,6	23,7	35,0	46,0	56,0	65,0	75,0		14,8	27,4	40,0	53,0	64,0
68,0 72,0		9,5 6,8	20,1 16,8	30,5 26,8	41,0 35,5	50,0 44,0	59,0 53,0	68,0 61,0		11,6 8,8	23,6 20,1	35,5 31,5	47,0 41,5	57,0 51,0
72,0 76,0		0,0	13,9	23,0	31,0	39,0	47,5	55,0		6,2	17,0	27,2	36,5	46,0
80,0			11,2	20,2	27,7	35,5	43,0	51,0		0,2	14,3	24,1	33,0	42,0
84,0			8,9	17,5	24,3	31,5	39,0	46,5			11,8	21,0	29,2	37,5
88,0			6,8	14,7	20,9	27,8	35,0	42,0			9,5	17,9	25,4	33,5
92,0			-,-	12,4	18,1	24,6	31,5	38,0			7,5	15,3	22,3	30,0
96,0				10,7	16,1	22,1	28,4	35,0			5,7	13,5	20,0	27,2
100,0				9,0	14,2	19,6	25,5	32,0				11,7	17,8	24,3
104,0				7,4	12,3	17,1	22,6	28,7				9,9	15,5	21,4
108,0				6,0	10,8	15,5	20,4	26,2				8,5	13,9	19,5
112,0					9,6	13,0	16,2	19,9				6,7	10,2	14,0
* n *	7	9	10	10	10	10	10	10	7	10	10	10	10	10
	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	15.0	15.0	15.0	15.0	15.0	15.0
уу zz	13.0 0.0	13.0 50.0	13.0 100.0	13.0 150.0	13.0 200.0	13.0 250.0	13.0 300.0	13.0 350.0	15.0 0.0	15.0 50.0	15.0 100.0	15.0 150.0	15.0 200.0	15.0 250.0
	0.0	30.0	100.0	130.0	200.0	230.0	300.0	330.0	0.0	30.0	100.0	130.0	200.0	250.0
_														
<b>0-f0</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
<b>(</b>						$\overline{}$		$\overline{}$			1	•		`





074548									**	* 223				22.00
. A		] i r	n ><	t	CO	DE	> 54	449	<	V18	31 4	4300	.x(x	<b>(</b> )
m m	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0	114,0				
16,0	165,0	165,0	117,0	164,0	164,0	164,0	164,0	164,0	164,0	164,0				
18,0	165,0		102,0	148,0	163,0		163,0		163,0	163,0				
20,0	163,0	163,0	90,0	132,0	162,0		162,0	162,0	162,0	162,0				
22,0	162,0	162,0	79,0	118,0	157,0	162,0	162,0	162,0	162,0	162,0				
24,0	161,0	161,0	70,0	106,0	143,0	161,0	161,0	161,0	161,0	161,0				
26,0	159,0	159,0	63,0	96,0	130,0	157,0	159,0	159,0	159,0	159,0				
28,0	158,0	158,0	56,0	88,0	119,0	150,0	158,0	158,0	158,0	158,0				
30,0	157,0		50,0	80,0	110,0	139,0	157,0		157,0	157,0				
32,0	155,0	155,0	45,0	73,0	101,0	129,0	155,0	156,0	156,0	156,0				
34,0 36,0	152,0 146,0	152,0 149,0	40,0 36,0	67,0 61,0	93,0 86,0	120,0 112,0	147,0 137,0	153,0 147,0	154,0 150,0	154,0 150,0				
	140,0	145,0	32,0	56,0	80,0	104,0	128,0	147,0	147,0	147,0				
38,0 40,0	135,0	145,0	28,6	52,0	75,0	98,0	120,0	136,0	144,0	144,0				
40,0 44,0	124,0		22,5	43,5	65,0	86,0	107,0		137,0	137,0				
48,0	113,0	126,0	17,4	37,0	56,0	76,0	95,0	114,0	128,0	130,0				
52,0	102,0	114,0	13,0	31,0	49,5	67,0	86,0	103,0	117,0	123,0				
56,0	91,0	103,0	9,2	26,2	43,0	60,0	77,0	92,0	106,0	115,0				
60,0	81,0	92,0	5,9	21,9	38,0	54,0	68,0	82,0	95,0	108,0				
64,0	74,0	85,0	,	18,0	33,0	48,0	62,0	75,0	88,0	100,0				
68,0	68,0			14,7	28,9	43,0	56,0	68,0	80,0	92,0				
72,0	61,0	70,0		11,7	25,1	38,0	50,0	61,0	73,0	84,0				
76,0	55,0	64,0		9,0	21,8	33,5	44,5	56,0	66,0	77,0				
80,0	51,0	59,0		6,6	18,8	29,9	40,5	51,0	61,0	72,0				
84,0	46,0	54,0			16,1	26,3	36,5	46,5	57,0	66,0				
88,0	41,5	49,5			13,7	22,6	32,5	42,5	52,0	61,0				
92,0	37,5				11,5	19,6	29,0	38,5	47,5	56,0				
96,0	34,5	42,0			9,6	17,6	26,2	35,0	44,0	53,0				
100,0	31,5	38,5			7,8	15,6	23,3	32,0	40,5	49,0				
104,0	28,5	35,5			6,2	13,6	20,5	28,8	37,0	45,0				
108,0 112,0	26,0 18,2	32,5 22,6				12,1	18,6	26,3	34,5	38,0				
* n *	10	10	7	10	10	10	10	10	10	10				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
0-10														
<b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
								_						
	Q.I	2DB			ء	<u> </u>	14	1,0 x	<b>Win</b>					



074548									**	* 223				22.00
		] i r	n ><	t	CO	DE	> 54	450	<	V18	31 4	400	.x(x	)
m m	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0
16,0	107,0	144,0	145,0	145,0	145,0	145,0	145,0	145,0	109,0	146,0	146,0	146,0	146,0	146,0
18,0 20,0	94,0	127,0 113,0	144,0 143,0	144,0 143,0	144,0 143,0	144,0 143,0	144,0 143,0	144,0 143,0	96,0 84,0	134,0 119,0	145,0 144,0	145,0 144,0	145,0 144,0	145,0 144,0
20,0 22,0	82,0 72,0	101,0	129,0	141,0	141,0	143,0	141,0	143,0	74,0	106,0	139,0	142,0	142,0	142,0
24,0	64,0	90,0	117,0	140,0	140,0	140,0	140,0	140,0	66,0	96,0	126,0	141,0	141,0	141,0
26,0	57,0	81,0	106,0	131,0	138,0	138,0	138,0	138,0	58,0	86,0	114,0	140,0	140,0	140,0
28,0	51,0	74,0	97,0	120,0	134,0	136,0	136,0	136,0	52,0	78,0	104,0	131,0	137,0	138,0
30,0	45,0	67,0	88,0	110,0	129,0	135,0	135,0	135,0	46,0	71,0	96,0	121,0	134,0	137,0
32,0	40,0	61,0 55,0	81,0	102,0	122,0	134,0	134,0	134,0	41,0	65,0	88,0	111,0	132,0	136,0
34,0 36,0	35,5 31,5	50,0	74,0 69,0	94,0 87,0	113,0 106,0	133,0 124,0	133,0 129,0	133,0 130,0	36,5 32,5	59,0 54,0	81,0 75,0	103,0 96,0	125,0 117,0	135,0 131,0
38,0	27,9	45,5	63,0	81,0	99,0	116,0	124,0	126,0	28,9	49,0	69,0	89,0	109,0	126,0
40,0	24,6	41,5	58,0	75,0	92,0	109,0	119,0	123,0	25,6	45,0	64,0	83,0	102,0	120,0
44,0	18,8	34,5	50,0	65,0	81,0	96,0	109,0	116,0	19,7	37,5	55,0	73,0	90,0	108,0
48,0	14,0	28,3	42,5	57,0	71,0	86,0	98,0	110,0	14,8	31,0	47,5	64,0	80,0	96,0
52,0	9,8	23,1	36,5	50,0	63,0	76,0	89,0	100,0	10,5	25,7	41,0	56,0	71,0	86,0
56,0 60,0	6,2	18,7 14,7	31,0 26,4	43,5 38,0	56,0 50,0	68,0 61,0	80,0 71,0	90,0 81,0	6,9	21,1 17,0	35,5 30,5	49,5 43,5	64,0 57,0	78,0 69,0
64,0		11,3	22,3	33,5	44,5	54,0	63,0	73,0		13,5	26,0	38,5	51,0	62,0
68,0		8,3	18,7	29,1	39,5	49,0	58,0	66,0		10,3	22,2	34,0	46,0	56,0
72,0		5,6	15,5	25,4	35,0	43,5	52,0	60,0		7,5	18,8	30,0	40,5	51,0
76,0			12,6	21,7	30,0	38,5	46,5	54,0		5,0	15,7	26,1	35,5	45,0
80,0			10,0	18,4	26,3	34,0	41,5	49,0			13,0	22,5	31,5	40,5
84,0 88,0			7,6 5,5	16,2 13,7	23,4 20,5	30,5 27,0	38,0 34,0	45,0 41,0			10,5 8,2	19,9 17,3	28,1 24,7	36,5 33,0
92,0			3,3	11,5	17,6	23,5	30,5	37,0			6,2	14,7	21,4	29,1
96,0				9,5	15,0	20,4	26,9	33,5				12,4	18,5	25,7
100,0				7,6	13,3	18,5	24,5	30,5				10,8	16,6	23,3
104,0				6,0	11,5	16,5	22,0	27,8				9,1	14,8	20,9
108,0					9,8	14,6	19,5	25,0				7,5	12,9	18,5
112,0 116,0					8,3 7,1	12,9 11,4	17,5 15,8	22,5 20,2				6,1	11,4 10,0	16,5 14,9
120,0					6,4	8,0	9,3	10,5					10,0	14,3
* n *	7	9	9	9	9	9	9	9	7	9	9	9	9	9
	,	9	9	9	9	9	9	9	-	9	9	9	9	9
уу zz	13.0	13.0 50.0	13.0 100.0	13.0 150.0	13.0 200.0	13.0 250.0	13.0 300.0	13.0 350.0	15.0 0.0	15.0 50.0	15.0 100.0	15.0 150.0	15.0 200.0	15.0 250.0
<b>0-f0</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
	SL	_2DB			_		14	4,0 <sub>X</sub>						



074548	}									**	* 223				22.00
6	>		] i r	n ><	t	CO	DE	> 54	450	<	V18	31	4400	.x(x	)
	m	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0	120,0				
	16,0	146,0	146,0	113,0	145,0	145,0	145,0	145,0	145,0	145,0	145,0				
	18,0	145,0	145,0	98,0	143,0	144,0	144,0	144,0		144,0	144,0				
	20,0 22,0	144,0 142,0	144,0 142,0	87,0 77,0	128,0 115,0	143,0 142,0	143,0 142,0	143,0 142,0	143,0 142,0	143,0 142,0	143,0 142,0				
	24,0	141,0	141,0	68,0	103,0	139,0	141,0	141,0	141,0	141,0	141,0				
	26,0	140,0	140,0	60,0	94,0	127,0	140,0	140,0	140,0	140,0	140,0				
	28,0	138,0	138,0	54,0	85,0	116,0	137,0	139,0	139,0	139,0	139,0				
	30,0	137,0	137,0	48,0	77,0	107,0	132,0	138,0	138,0	138,0	138,0				
	32,0	136,0	136,0	43,0	71,0	98,0	126,0	137,0	137,0	137,0	137,0				
	34,0	135,0	135,0	38,5	65,0	91,0	117,0	136,0	136,0	136,0	136,0				
	36,0	132,0	132,0	34,0	59,0	84,0	109,0	133,0	133,0	133,0	133,0				
	38,0	128,0	128,0	30,5	54,0	78,0	102,0	126,0	130,0	130,0	130,0 129,0				
	40,0 44,0	124,0 117,0	128,0 123,0	27,0 21,0	50,0 42,0	73,0 63,0	95,0 84,0	118,0 105,0	126,0 119,0	129,0 124,0	129,0 125,0				
	44,0	110,0	118,0	16,0	35,5	55,0	74,0	93,0	111,0	124,0	120,0				
	52,0	100,0	109,0	11,7	29,7	47,5	66,0	84,0	101,0	111,0	114,0				
	56,0	90,0	100,0	7,9	24,8	41,5	58,0	75,0	91,0	102,0	108,0				
	60,0	80,0	91,0		20,5	36,5	52,0	68,0	81,0	94,0	101,0				
	64,0	72,0	83,0		16,7	31,5	46,5	60,0	73,0	86,0	95,0				
	68,0	66,0	76,0		13,4	27,5	41,5	55,0	67,0	79,0	89,0				
	72,0	60,0	70,0		10,4	23,8	37,0	49,5	61,0	72,0	82,0				
	76,0	54,0	63,0		7,7	20,5	32,5	44,0	55,0	66,0	76,0				
	80,0	49,0	58,0		5,4	17,5	28,5	39,0	49,5	60,0	70,0				
	84,0 88,0	45,0 41,0	53,0 49,0			14,8 12,4	25,4 22,3	35,5	45,5	55,0 51,0	65,0 60,0				
	92,0	37,0	44,5			10,2	19,2	32,0 28,1	41,5 37,5	46,5	56,0				
	96,0	33,0	40,5			8,2	16,4	24,8	33,5	42,5	51,0				
1	00,0	30,5	37,5			6,4	14,6	22,4	31,0	39,5	48,0				
	04,0	27,6	34,5			,	12,9	20,1	28,0	36,5	44,5				
	08,0	24,7	31,5				11,1	17,8	25,2	33,0	41,0				
	12,0	22,3	28,7				9,6	15,9	22,7	29,1	34,0				
	16,0	20,0	26,3				8,3	14,3	20,4	24,1	24,1				
1	20,0														
* *		0		7				0	0		0				
* n *		9	9	7	9	9	9	9	9	9	9				
уу	, —	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
ZZ		300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	-														
<b>0-∤0</b>															
m	m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
	175		·	•		· ·	•		,		•				
			l									_			
	1				$\Box$		7		7	4	1				
		<b>I</b>		1		-		<b>■</b> 1/	1 0 📕	<b>■                    </b>	/38//				

SL2DB 120m



074548									**	* 223				22.00
		l 1 n	n ><	t	CO	DE	> 54	451	<	V18	31 4	500	.x(x	)
m m	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0
16,0	104,0	128,0	128,0	128,0	128,0	128,0	128,0	128,0	106,0	128,0	127,0	127,0	127,0	127,0
18,0	91,0	124,0	127,0	127,0	127,0	127,0	127,0	127,0	93,0	127,0	127,0	127,0	127,0	127,0
20,0	80,0 70,0	110,0 98,0	126,0 124,0	126,0 125,0	126,0 125,0	126,0 125,0	126,0 125,0	126,0	82,0 72,0	116,0 104,0	126,0 126,0	126,0 126,0	126,0 126,0	126,0 126,0
22,0 24,0	62,0	88,0	114,0	123,0	123,0	123,0	123,0	125,0 124,0	64,0	93,0	123,0	125,0	125,0	125,0
26,0	55,0	80,0	104,0	124,0	124,0	124,0	124,0	124,0	57,0	84,0	112,0	124,0	124,0	124,0
28,0	49,0	72,0	95,0	117,0	122,0	122,0	122,0	122,0	50,0	76,0	102,0	123,0	123,0	123,0
30,0	43,5	65,0	87,0	108,0	119,0	121,0	121,0	121,0	45,0	69,0	94,0	118,0	122,0	122,0
32,0	39,0	59,0	79,0	100,0	116,0	120,0	120,0	120,0	40,0	63,0	86,0	109,0	121,0	122,0
34,0	34,5	54,0	73,0	92,0	111,0	120,0	120,0	120,0	35,5	57,0	79,0	101,0	120,0	121,0
36,0	30,5	49,0	67,0	85,0	104,0	119,0	119,0	119,0	31,5	52,0	73,0	94,0	115,0	120,0
38,0	26,9	44,5	62,0	79,0	97,0	114,0	115,0	115,0	27,9	48,0	68,0	88,0	108,0 101,0	116,0
40,0 44,0	23,7 18,0	40,5 33,5	57,0 48,5	74,0 64,0	91,0 79,0	107,0 95,0	111,0 103,0	114,0 109,0	24,6 18,9	43,5 36,5	63,0 54,0	82,0 71,0	101,0 89,0	112,0 103,0
48,0	13,2	27,4	41,5	56,0	70,0	84,0	96,0	105,0	14,0	30,0	46,5	63,0	79,0	94,0
52,0	9,1	22,3	35,5	48,5	62,0	75,0	87,0	98,0	9,8	24,9	40,0	55,0	70,0	85,0
56,0	5,5	17,8	30,0	42,5	55,0	67,0	79,0	89,0	6,2	20,3	34,5	48,5	63,0	77,0
60,0		14,0	25,6	37,0	49,0	60,0	71,0	81,0		16,2	29,5	42,5	56,0	69,0
64,0		10,6	21,5	32,5	43,5	53,0	63,0	72,0		12,7	25,2	37,5	50,0	61,0
68,0		7,5	17,9	28,2	38,5	47,5	57,0	65,0		9,5	21,4	33,0	45,0	55,0
72,0			14,7	24,5	34,5	43,0	52,0	60,0		6,7	17,9	29,2	40,0	50,0
76,0 80,0			11,8 9,1	21,1 18,1	29,9 25,4	38,0 33,5	46,5 41,0	54,0 48,5			14,9 12,1	25,6 21,5	35,5 30,5	45,0 39,5
80,0 84,0			6,8	15,3	22,1	29,6	37,0	44,0			9,6	18,4	27,1	35,5
88,0			0,0	12,8	19,6	26,5	33,5	40,5			7,4	16,2	24,2	32,0
92,0				10,6	17,1	23,4	29,9	36,5			5,3	14,0	21,2	28,6
96,0				8,5	14,6	20,3	26,5	33,0				11,8	18,3	25,2
100,0				6,6	12,2	17,4	23,1	29,5				9,7	15,6	22,0
104,0					10,7	15,6	21,1	26,9				8,2	13,9	19,9
108,0					9,1	13,9	19,0	24,3				6,5	12,2	17,9
112,0 116,0					7,6 6,1	12,1 10,5	16,9	21,7 19,3				5,0	10,6 9,0	15,9
120,0					0, 1	9,2	14,9 13,4	17,6					7,7	14,0 12,6
124,0						8,1	10,9	13,4					5,5	8,5
* n *	6	8	8	8	8	8	8	8	7	8	8	8	8	8
									-					
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>ZZ</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
<del></del>														
4														
o <b>-∦o</b>														
<b> </b>	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
											_		_	
<u> </u>					ء	[ ]	1/	١٥٠. ]	<b>W</b>					
	Sl	_2DB				<u> </u>	<b>.</b>	1,0 x						

126m



074548										* 223			4	22.00
		] i r	n ><	t	CO	DE	> 54	451	<	V18	31 4	500	.x(x	)
m m	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0				
16,0	127,0	127,0		127,0	127,0	127,0	127,0	127,0	127,0	127,0				
18,0	127,0	127,0	96,0	126,0	126,0	126,0	126,0	126,0	126,0	126,0				
20,0	126,0	126,0	84,0	125,0	126,0	126,0	126,0	126,0	126,0	126,0				
22,0	126,0	126,0	74,0	112,0	125,0	125,0	125,0	125,0	125,0	125,0				
24,0 26,0	125,0 124,0	125,0 124,0	66,0 59,0	101,0 92,0	125,0 124,0	125,0 124,0	125,0 124,0	125,0 124,0	125,0 124,0	125,0 124,0				
28,0	123,0	123,0	52,0	83,0	114,0	122,0	123,0	123,0	123,0	123,0				
30,0	122,0	122,0	47,0	76,0	105,0	120,0	121,0	121,0	121,0	121,0				
32,0	122,0	122,0	41,5	69,0	97,0	118,0	120,0	120,0	120,0	120,0				
34,0	121,0	121,0	37,0	63,0	89,0	115,0	119,0	119,0	119,0	119,0				
36,0	120,0	120,0	33,0	58,0	83,0	107,0	118,0	118,0	118,0	118,0				
38,0	117,0	117,0	29,4	53,0	77,0	100,0	114,0	116,0		116,0				
40,0	115,0	115,0	26,1	48,5	71,0	94,0	110,0	114,0	114,0	114,0				
44,0	110,0	112,0	20,2	41,0	62,0	82,0	101,0	110,0		111,0				
48,0	105,0	107,0	15,2	34,5	54,0	73,0	92,0	106,0	107,0	107,0				
52,0	98,0	102,0	10,9	28,8	46,5	64,0	82,0	99,0		103,0				
56,0	89,0	95,0	7,2	23,9	40,5	57,0	74,0	90,0	97,0	99,0				
60,0	80,0	88,0		19,7	35,5	51,0	67,0	81,0		94,0				
64,0	72,0	82,0		15,9	30,5	45,5	60,0	72,0	84,0	89,0				
68,0	65,0	75,0		12,6	26,6	40,5	54,0	66,0	78,0	84,0				
72,0 76.0	60,0	69,0		9,6	22,9	36,0	49,0	60,0	72,0 66,0	79,0				
76,0 80,0	54,0 48,5	63,0 57,0		7,0	19,6 16,6	32,5 27,7	44,0 38,5	55,0 49,0		74,0 69,0				
80,0 84,0	44,0	52,0			13,9	24,2	34,5	44,5	54,0	64,0				
88,0	40,5	48,5			11,5	21,6	31,0	40,5	50,0	60,0				
92,0	36,5	44,5			9,3	18,9	27,7	37,0	46,5	55,0				
96,0	33,0	40,5			7,3	16,3	24,2	33,0	42,0	51,0				
100,0	29,3	36,5			5,4	13,7	21,0	29,6	38,0	46,5				
104,0	26,7	33,5				12,1	19,0	27,0	35,5	43,5				
108,0	24,1	31,0				10,5	17,1	24,4		40,5				
112,0	21,5	27,9				8,8	15,2	21,9	29,5	37,0				
116,0	19,1	25,2				7,3	13,3	19,5	26,7	33,5				
120,0	17,5	22,9				6,1	11,9	17,8	24,5	28,6				
124,0	11,3	14,5												
* n *	8	8	6	8	8	8	8	8	8	8				
	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
уу zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
	300.0	330.0	0.0	30.0	100.0	130.0	200.0	230.0	300.0	330.0				
ე_••														
<b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
,								$\overline{}$			_	•		



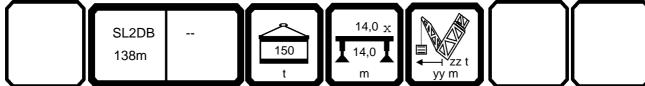
074548										* 223				22.00
	MM	l n	n ><	t	CO	DE	> 54	452	<	V18	31 4	600	.x(x	()
m m	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0
18,0	88,0	108,0	108,0	108,0	108,0	108,0	108,0	108,0	90,0	111,0	111,0	111,0	111,0	111,0
20,0	77,0	106,0	106,0	106,0	106,0	106,0	106,0	106,0	79,0	110,0	110,0	110,0	110,0	110,0
22,0	68,0	96,0	105,0	105,0	105,0	105,0	105,0	105,0	70,0	101,0	109,0	109,0	109,0	109,0
24,0	60,0	86,0	104,0	104,0	104,0	104,0	104,0	104,0	62,0	91,0	109,0	109,0	109,0	109,0
26,0	53,0	77,0	101,0	103,0	103,0	103,0	103,0	103,0	55,0	82,0	108,0	108,0	108,0	108,0
28,0	47,5 42,0	70,0 63,0	92,0	102,0 99,0	102,0 101,0	102,0	102,0 101,0	102,0	48,5	74,0	100,0 92,0	106,0 104,0	106,0 105,0	106,0 105,0
30,0 32,0	42,0 37,5	57,0	84,0 77,0	96,0	101,0	101,0 100,0	100,0	101,0 100,0	43,5 38,5	67,0 61,0	92,0 84,0	104,0	105,0	105,0
34,0	33,0	52,0	71,0	90,0	100,0	100,0	100,0	100,0	34,0	56,0	78,0	99,0	103,0	103,0
36,0	29,2	47,5	65,0	84,0	99,0	99,0	99,0	99,0	30,0	51,0	72,0	92,0	103,0	103,0
38,0	25,7	43,0	60,0	78,0	95,0	98,0	98,0	98,0	26,7	46,5	66,0	86,0	103,0	103,0
40,0	22,5	39,0	56,0	72,0	89,0	95,0	96,0	96,0	23,5	42,5	61,0	80,0	98,0	99,0
44,0	16,9	32,0	47,5	63,0	78,0	88,0	92,0	95,0	17,8	35,0	52,0	70,0	87,0	94,0
48,0	12,2	26,3	40,5	54,0	68,0	81,0	89,0	93,0	13,0	29,0	45,0	61,0	77,0	88,0
52,0	8,1	21,2	34,5	47,5	61,0	74,0	85,0	91,0	8,8	23,8	38,5	54,0	69,0	83,0
56,0		16,8	29,1	41,5	54,0	66,0	78,0	85,0	5,3	19,2	33,0	47,0	61,0	75,0
60,0		13,0	24,5	36,0	47,5	59,0	70,0	78,0		15,3	28,4	41,5	55,0	68,0
64,0		9,6	20,5	31,5	42,0	53,0	62,0	71,0		11,8	24,1	36,5	49,0	61,0
68,0		6,6	16,9	27,2	37,5	46,5	55,0	64,0		8,6	20,4	32,0	43,5	54,0
72,0			13,7	23,5	33,5	42,0	50,0	58,0		5,9	17,0	28,1	39,0	49,0
76,0			10,8	20,1	29,1	37,5	45,5	53,0			14,0	24,6	35,0	44,0
80,0 84,0			8,3 5,9	17,1 14,4	25,0 20,9	33,0 28,5	41,0 36,0	48,5 43,0			11,2 8,7	21,3 17,8	30,5 26,0	39,5 34,5
88,0			5,9	11,9	18,1	25,3	32,5	39,0			6, <i>1</i>	15,3	20,0	31,0
92,0				9,7	16,0	22,7	29,1	36,0			0,3	13,3	20,5	27,9
96,0				7,6	14,0	20,0	26,0	32,5				11,1	18,0	24,9
100,0				5,7	11,9	17,4	22,8	29,0				9,1	15,5	21,8
104,0					9,8	14,7	19,7	25,6				7,3	13,1	18,8
108,0					8,4	13,1	17,9	23,4				5,6	11,5	17,0
112,0					7,0	11,6	16,1	21,2					10,0	15,3
116,0					5,6	10,0	14,4	19,0					8,5	13,6
120,0						8,4	12,6	16,8					7,0	11,9
124,0						7,2	11,3	15,3					5,8	10,5
128,0	-	-	-	-		5,5	9,0	12,5	_	-				8,4
* n *	6	7	7	7	7	7	7	7	6	7	7	7	7	7
уу —	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
zz	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
	0.0	00.0	100.0	100.0	200.0	200.0	000.0	000.0	0.0	00.0	100.0	100.0	200.0	200.0
0.40														
10-240														
<b>U</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
							_	_		_	_	$\overline{}$	_	$\overline{}$



074548									**	* 223				22.00
. A	MM	] i r	n ><	t	CO	DE	> 54	452	<	V18	31	4600	.x(x	)
m	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0	132,0				_
18,0	111,0	111,0	93,0	110,0	110,0	110,0	110,0	110,0	110,0	110,0				
20,0	110,0	110,0	82,0	110,0	110,0		110,0	110,0		110,0				
22,0	109,0	109,0	72,0	109,0	109,0	109,0	109,0	109,0	109,0	109,0				
24,0	109,0	109,0	64,0	98,0	108,0	108,0	108,0	108,0	108,0	108,0				
26,0	108,0	108,0	57,0	89,0	108,0	108,0	108,0	108,0	108,0	108,0				
28,0	106,0	106,0	51,0	81,0	107,0	107,0	107,0	107,0	107,0	107,0				
30,0 32,0	105,0 105,0	105,0 105,0	45,0 40,0	74,0	102,0 94,0	106,0 105,0	106,0 105,0	106,0 105,0	106,0 105,0	106,0 105,0				
34,0	103,0	103,0	36,0	67,0 62,0	87,0	103,0	103,0	103,0		103,0				
36,0	103,0	103,0	32,0	56,0	81,0	104,0	104,0	104,0	104,0	104,0				
38,0	103,0	103,0	28,2	52,0	75,0	98,0	102,0	102,0	102,0	102,0				
40,0	99,0	99,0	24,9	47,0	70,0	92,0	99,0	101,0	101,0	101,0				
44,0	98,0	98,0	19,1	39,5	60,0	81,0	94,0	98,0	98,0	98,0				
48,0	96,0	96,0	14,2	33,0	52,0	71,0	88,0	95,0	95,0	95,0				
52,0	93,0	93,0	10,0	27,7	45,5	63,0	81,0	93,0	93,0	93,0				
56,0	86,0	88,0	6,3	22,9	39,5	56,0	73,0	86,0	88,0	88,0				
60,0	78,0	83,0		18,7	34,0	50,0	65,0	79,0	84,0	85,0				
64,0	71,0	78,0		15,0	29,6	44,5	59,0	71,0	80,0	82,0				
68,0	63,0	73,0		11,7	25,6	39,5	52,0	64,0	76,0	78,0				
72,0	58,0	68,0		8,7	21,9	35,0	47,5	59,0	70,0	74,0				
76,0	53,0	62,0		6,1	18,6	31,0	43,0	54,0	65,0	70,0				
80,0	48,0	57,0			15,7	27,3	38,5	49,0	59,0	66,0				
84,0	43,0	51,0			13,0	23,1	33,5	44,0	54,0	62,0				
88,0	39,0	47,0			10,6	20,2	30,0	39,5	49,0	58,0				
92,0 96,0	35,5 32,5	43,5 39,5			8,4 6,4	17,9 15,7	27,0 24,0	36,5 33,0	45,5 41,5	54,0 50,0				
100,0	28,9	36,0			0,4	13,4	21,0	29,4	38,0	46,0				
104,0	25,4	32,5				11,2	18,0	26,0	34,0	42,5				
108,0	23,2	29,8				9,7	16,2	23,7	31,5	39,5				
112,0	21,0	27,2				8,2	14,6	21,5	28,8	36,5				
116,0	18,9	24,5				6,8	12,9	19,2	26,2	33,5				
120,0	16,7	21,9				5,3	11,2	17,0	23,5	30,5				
124,0	15,2	20,1					9,4	12,1	15,1	18,5				
128,0	12,4	16,5					6,9	6,9	6,9	6,9				
* n *	7	7	6	7	7	7	7	7	7	7				
	4= 0	4= 0	40.0	40.0	10.0	40.0	40.0	40.0	40.0	40.0				
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
<b>ZZ</b>	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
						L		L			L			
<b>0-∦0</b>														
∥ <b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
1170														
											_			
									180	AD.				Ì



074548									**	* 223				22.00
		] i r	n ><	t	CO	DE	> 54	453	<	V18	31 4	700	.x(x	<b>()</b>
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0
18,0	86,0	93,0	93,0	93,0	93,0	93,0	93,0	93,0	87,0	96,0	96,0	96,0	96,0	96,0
20,0	75,0	92,0	92,0	92,0	92,0	92,0	92,0	92,0	77,0	95,0	95,0	95,0	95,0	95,0
22,0	66,0	91,0	91,0	91,0	91,0	91,0	91,0	91,0	68,0	94,0	94,0	94,0	94,0	94,0
24,0	59,0	84,0	90,0	90,0	90,0	90,0	90,0	90,0	60,0	89,0	94,0	94,0	94,0	94,0
26,0	52,0	76,0	89,0	89,0	89,0	89,0	89,0	89,0	53,0	80,0	93,0	93,0	93,0	93,0
28,0	46,0	68,0	89,0	89,0	89,0	89,0	89,0	89,0	47,5	73,0	92,0	92,0	92,0	92,0
30,0 32,0	41,0 36,5	62,0 56,0	83,0 76,0	88,0 86,0	88,0 87,0	88,0 87,0	88,0 87,0	88,0 87,0	42,0 37,5	66,0 60,0	90,0 83,0	92,0 91,0	92,0 91,0	92,0 91,0
34,0	32,0	51,0	70,0	84,0	87,0	87,0	87,0	87,0	33,0	55,0	76,0	90,0	90,0	90,0
36,0	28,3	46,0	64,0	82,0	87,0	87,0	87,0	87,0	29,3	50,0	70,0	89,0	90,0	90,0
38,0	24,8	42,0	59,0	76,0	86,0	86,0	86,0	86,0	25,8	45,5	65,0	84,0	89,0	89,0
40,0	21,7	38,0	54,0	71,0	85,0	85,0	85,0	85,0	22,6	41,5	60,0	79,0	88,0	88,0
44,0	16,2	31,5	46,5	61,0	76,0	80,0	83,0	83,0	17,0	34,0	51,0	69,0	81,0	85,0
48,0	11,5	25,5	39,5	53,0	67,0	76,0	81,0	82,0	12,3	28,2	44,0	60,0	75,0	82,0
52,0	7,5	20,5	33,5	46,5	59,0	71,0	79,0	80,0	8,2	23,0	38,0	53,0	67,0	79,0
56,0		16,1	28,3	40,5	53,0	65,0	76,0	77,0		18,5	32,5	46,5	60,0	74,0
60,0		12,3	23,8	35,0	46,5	58,0	69,0	72,0		14,6	27,6	40,5	54,0	67,0
64,0		9,0	19,8	30,5	41,5	52,0	62,0	67,0		11,1	23,4	35,5	48,0	60,0
68,0		6,0	16,2	26,4	36,5	46,5	55,0	62,0		8,0	19,6	31,5	43,0	54,0
72,0			13,0	22,7	32,5	41,0	49,0	57,0		5,2	16,3	27,3	38,0	47,5
76,0			10,2	19,4	28,6	37,0	44,5	53,0			13,3	23,8	34,0	43,5
80,0 84,0			7,6 5,2	16,4 13,7	24,9 21,2	32,5 28,4	40,5 36,0	48,0 43,5			10,5	20,6 17,7	29,9 25,9	39,0 34,5
88,0			5,2	11,2	17,6	24,3	31,5	38,5			8,0 5,8	14,9	25,9	30,0
92,0				8,9	15,2	21,5	28,3	35,0			3,0	12,6	19,2	27,0
96,0				6,8	13,3	19,2	25,5	32,0				10,3	17,1	24,3
100,0				-,-	11,4	16,9	22,7	28,6				8,3	14,9	21,6
104,0					9,5	14,6	19,9	25,4				6,4	12,8	18,9
108,0					7,6	12,3	17,1	22,2					10,7	16,2
112,0					6,2	10,7	15,3	20,1					9,2	14,5
116,0						9,3	13,6	18,2					7,8	12,9
120,0						7,8	12,0	16,4					6,4	11,3
124,0						6,3	10,4	14,6						9,7
128,0 * n *						5,1	9,0	13,0 6	_	_	_	_	_	8,3 6
" n "	5	6	6	6	6	6	6	ь	5	6	6	6	6	6
уу —	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
ZZ	0.0	50.0	100.0	150.0	200.0	250.0		350.0	0.0	50.0	100.0	150.0	200.0	-
									0.0					
<b>-40</b>														
	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9.0	9,0
<b>Ш</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
						$\overline{}$	_	$\overline{}$						





74548									**	* 223				22.00
		] ·	m ><	t	CO	DE	> 54	453	<	V18	31 4	700	.x(x	<b>(</b> )
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0
132,0							7,8	11,6						7,
* n *	5	6	6	6	6	6	6	6	5	6	6	6	6	6
уу	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>ZZ</b>	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0
<b>-</b> {•														
<b>I</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0



074548									**	* 223				22.00
		] i r	n ><	t	CO	DE	> 54	453	<	V18	31 4	1700	.x(x	)
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0				
18,0	96,0	96,0	90,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0				
20,0	95,0	95,0	79,0	96,0	96,0	96,0	96,0	96,0	96,0	96,0				
22,0	94,0	94,0	70,0	95,0	95,0	95,0	95,0	95,0		95,0				
24,0	94,0	94,0	62,0	94,0	94,0	94,0	94,0	94,0	94,0	94,0				
26,0	93,0	93,0	55,0	87,0	93,0	93,0	93,0	93,0	93,0	93,0				
28,0	92,0	92,0	49,5	79,0	93,0	93,0	93,0	93,0	93,0	93,0				
30,0	92,0	92,0	44,0	72,0	92,0	92,0	92,0	92,0		92,0				
32,0	91,0	91,0	39,0	66,0	89,0	91,0	91,0	91,0		91,0				
34,0	90,0	90,0	35,0	60,0	86,0	89,0	89,0	89,0		89,0				
36,0	90,0	90,0	31,0	55,0	79,0	88,0	88,0	88,0	88,0	88,0				
38,0	89,0	89,0	27,3	50,0	74,0	87,0	87,0	87,0	87,0	87,0				
40,0	88,0	88,0	24,0	46,0	68,0	86,0	86,0	86,0	86,0	86,0				
44,0	85,0	85,0	18,3	38,5	59,0	79,0	83,0	83,0		83,0				
48,0	82,0	82,0	13,5	32,5	51,0	70,0	80,0	81,0	81,0	81,0				
52,0	80,0	80,0	9,3	26,9	44,5	62,0	77,0	78,0		78,0				
56,0	76,0	76,0	5,7	22,1	38,5	55,0	71,0	75,0	75,0	75,0				
60,0	71,0	74,0		18,0	33,5	49,0	64,0	71,0	73,0	73,0				
64,0	67,0	72,0		14,3	28,9	43,5	58,0	66,0	71,0	71,0				
68,0	62,0	70,0		11,0	24,8	38,5	52,0	62,0		69,0				
72,0	57,0	66,0		8,1	21,2	34,5	46,5	58,0		67,0				
76,0	53,0	61,0		5,4	17,9	30,5	42,0	53,0		64,0				
80,0	48,0	56,0			15,0	26,9	38,0	48,5	57,0	61,0				
84,0	43,0	51,0			12,3	23,2	33,5	43,5	53,0	58,0				
88,0	38,5	46,5			9,9	19,3	29,1	39,0	48,0	55,0				
92,0	35,0	42,5			7,6	16,8	25,9	35,0		51,0				
96,0 100,0	31,5 28,4	39,0 35,5			5,6	14,9 12,9	23,3 20,7	32,0 28,8	41,0 37,5	48,0 45,0				
100,0	25,2	32,5				10,9	18,1	25,6	34,0	41,5				
104,0	22,0	28,9				8,9	15,5	22,4		38,5				
112,0	19,9	26,3				7,4	13,8	20,3	27,9	35,5				
116,0	18,1	24,0				6,1	12,2	18,5	25,5	32,5				
120,0	16,3	21,6				0,1	10,6	16,6		30,0				
124,0	14,4	19,3					9,0	14,7	20,6	27,2				
128,0	12,9	17,4					5,7	9,4	13,2	17,6				
* n *	6	6	6	6	6	6	6	6	6	6				
									_ <u> </u>					
уу	15.0	15.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0				
zz	300.0	350.0	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0				
o <b>_{0</b>														
∥ <b>I</b> I m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0				
<b>1</b> —				-		-		-			<b>7</b>	_	)/	





074548										* 223				22.00
		1 1 r	n ><	t	CO	DE	> 54	453	<	V18	31 4	4700	.x(x	()
m m	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0	138,0			ı	
132,0	11,5	15,9												
													I	
													I	
													I	
* n *	6	6	6	6	6	6	6	6	6	6				
уу zz	15.0 300.0	15.0 350.0	18.0 0.0	18.0 50.0	18.0 100.0	18.0 150.0	18.0 200.0	18.0 250.0	18.0 300.0	18.0 350.0				
<b>0-40</b> m/s	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0			ı	
w IIVS	,	,		,	,	,	,	,	,	,				
								$\overline{}$				$\overline{}$	_	<u> </u>

Tablas de Cargas	
	LIEBHERR