

ATC LOGISTICS, INC.
No. 019991 NF

COMBINED TRANSPORT BILL OF LADING

SHIPPER / EXPORTER QINGDAO SEAH PRECISION METAL CO., LTD THE WEST SIDE OF THE 35TH WAY, THE SOUTH OF THE 6TH WAY, FUYUAN INDUSTRIAL GARDEN DEVELOPMENT DISTRICT, QINGDAO SHANDONG, CHINA TEL: 86-532-8316-6057 FAX: 86-532-8316-6633		BOOKING NO. 292303979 EXPORT REFERENCES	B/L NO. ATCTAS210206	
CONSIGNEE SEAH PRECISION MEXICO S.A.D.E C.V AV. EL MARQUES NO.20 LOTE 7 MANZANA XV FRACCIONAMIENTO, PARQUE INDUSTRIAL QUERETARO, SANTA ROSA JAUREGUI, QUERETARO, QUERETARO CP76220 MEXICO TEL: 52-442-357-1602		FORWARDING AGENT REFERENCES	FMC NO.	
		POINT AND COUNTRY OF ORIGIN		
NOTIFY PARTY SEAH PRECISION MEXICO S.A.D.E C.V AV. EL MARQUES NO.20 LOTE 7 MANZANA XV FRACCIONAMIENTO, PARQUE INDUSTRIAL QUERETARO, SANTA ROSA JAUREGUI, QUERETARO, QUERETARO CP76220 MEXICO TEL: 52-442-357-1602		FOR DELIVERY OF GOODS PLEASE APPLY TO: ATC LOGISTICS INC. 14350 GARFIELD AVE. UNIT# 800 PARAMOUNT, CA 90723 TEL:+1 310 667 5421 FAX:+1 310 667 5472		
R/P-CARRIAGE BY SALLY MAERSK/105S		PLACE OF RECEIPT QINGDAO, CHINA	ROUTING INSTRUCTIONS	
PORT OF DISCHARGE LAZARO CARDENAS		PORT OF LOADING QINGDAO, CHINA		
PARTICULARS FURNISHED BY SHIPPER				
MARKS AND NUMBERS	NO OF PKGS	DESCRIPTION OF PACKAGES AND GOODS	GROSS WEIGHT	MEASUREMENT
	20GPX2, 40GPX1 36 PACKAGES	SAID TO CONTAIN : == ATTACHED RIDER == "FREIGHT COLLECT" SAY : THREE (20GPX2, 40GPX1) CONTAINER(S) ONLY <small>These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to United States law prohibited.</small>	44,860.000KGS	70.000CBM
CY/DOOR <small>Total Number of Containers or Packages (in Words)</small>			ON BOARD DATE FEB.11.2021	

RECEIVED from the Shipper in apparent good order and condition unless otherwise indicated herein, the cargo or the container(s) or package(s) said to contain the cargo herein mentioned, to be carried subject to all the terms and conditions provided for on the face and back of this Bill of Lading, from the place of receipt or port of loading to the port of discharge or place of delivery shown herein and there to be delivered.

If REQUIRED by Carrier, this Bill of Lading duly endorsed must be surrendered in exchange for Goods or delivery order. None of the terms of this Bill of Lading can be waived by or for Carrier except by express waiver signed by Carrier or its duly authorized agent.

IN ACCEPTING THIS BILL OF LADING, Merchant agrees to be bound by all the stipulations, exceptions, terms and conditions on the face and back hereof, and the terms and conditions contained in Carrier's applicable Tariff, whether written, typed, stamped, or printed, as fully as if signed by Merchant, any local custom or privilege to the contrary notwithstanding, and agrees that all representations, agreements or freight engagements for and in connection with Carriage of Goods are superseded by this Bill of Lading.

QINGDAO, CHINA

FEB.11.2021

THREE(3)

IN WITNESS WHEREOF, the undersigned, on behalf of MCI GLOBAL LOGISTICS USA INC., has signed the number of Bill(s) of Lading stated herein, all of the same tenor and date, one of which being accomplished, the others to stand void.

ATC LOGISTICS, INC.

FREIGHT CHARGES PAYABLE AT

DESTINATION

PREPAID

COLLECT

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== ATTACHED RIDER ==

HOUSE B/L NO : ATCTAS210206

SEAH PRECISION MEXICO S.A.DE C.V	SINGLE WALL STEEL TUBE
DESTINATION:	HS CODE:73063011
SPEC.	TSW-GSG 4.76*0.7T COIL
Q'TY :	TSW-K3 8.00*0.7T GSG COIL
CASES NO:	TDW Z25 GPF 4.76*0.7T 5000 MM
// CONTAINER NO //	TDW Z25 GPF 4.76*0.7T 1279 MM
MSKU7185935/CN1738233(20GP)/17(PACKAGES)	TDW Z25 GPF 4.76*0.7T 1628 MM
22,510.000KGS/24.000CBM	TDW Z25 GPF 4.76*0.7T 2247 MM
MRKU0976465/CN1738259(40GP)/7(PACKAGES)	TDW Z25 GPF 4.76*0.7T 2346 MM
7,070.000KGS/28.000CBM	TDW Z25 GPF 4.76*0.7T 2092 MM
MSKU7843403/CN1842141(20GP)/12(PACKAGES)	TDW Z25 GPF 4.76*0.7T 2416 MM
15,280.000KGS/18.000CBM	HS CODE:3926909090
	CLIP-1420754-00-A
	CLIP-1420791-00-A
	CLIP 1420757-00-A
	CLIP-1527077-00-A
	CLIP-1420755-00-A
	HS CODE:3923500000
	PROTECTIVE CAP (M12 MALE)

COMMERCIAL INVOICE

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1-7	MIC2GCD04	TSW-GSG 4.76*0.7T COIL	132,540 MTR	9198KG	9583KG																																																																																																																														
8~9	MIC3GPF03	TDW Z25 GPF 4.76*0.7T 5000]	10,900 EA	3850KG	4170KG																																																																																																																														
	1420713-00-B	TDW Z25 GPF 4.76*0.7T 1279 MM	1,647 EA	149KG																																																																																																																															
	1420714-00-C	TDW Z25 GPF 4.76*0.7T 1628 MM	1,511 EA	174KG																																																																																																																															
10	1420716-00-C-1	TDW Z25 GPF 4.76*0.7T 2247 MM	800 EA	127KG	948KG																																																																																																																														
	1420716-00-C-2	TDW Z25 GPF 4.76*0.7T 2346 MM	800 EA	133KG																																																																																																																															
	1420717-00-B	TDW Z25 GPF 4.76*0.7T 2092 MM	1,000 EA	148KG																																																																																																																															
	1420718-00-B	TDW Z25 GPF 4.76*0.7T 2416 MM	800 EA	137KG																																																																																																																															
		CLIP-1420754-00-A	2,000 EA	10KG																																																																																																																															
11		CLIP-1420791-00-A	24,230 EA	36KG	387KG																																																																																																																														
		CLIP 1420757-00-A	69,000 EA	311KG																																																																																																																															
		CLIP-1527077-00-A	60,000 EA	120KG																																																																																																																															
12		CLIP-1420755-00-A	15,000 EA	17KG	192KG																																																																																																																														
		PROTECTIVE CAP (M12 MALE)	40,000 EA	40KG																																																																																																																															
		TOTAL	491,050.0 MTR	41,963 KG	44860KG																																																																																																																														
SIGNED BY																																																																																																																																			
QINGDAO SEAH PRECISION METAL CO., LTD.																																																																																																																																			
 JP SIM <small>AUTHORIZED SIGNATURE</small>																																																																																																																																			

TSW 4.76*0.7 GSG SPCD PACKING DETAIL

No.	pallet no	packing date	Coil number	quantity	nitrogen precharge pressure (MPa)	total quantity
1	1	1/17/2021	210115D015	3620	2.20	18020
2		1/17/2021	210115D016	3600	2.20	
3		1/17/2021	210115D017	3600	2.40	
4		1/17/2021	210115N001	3600	2.60	
5		1/17/2021	210115N002	3600	2.60	
6	2	1/17/2021	210115N003	3580	2.80	18020
7		1/17/2021	210115N004	3620	2.60	
8		1/17/2021	210115N005	3600	3.00	
9		1/17/2021	210115N006	3600	2.40	
10		1/17/2021	210115N007	3620	2.70	
11	3	1/17/2021	210115N008	3600	3.00	18020
12		1/17/2021	210115N009	3620	2.80	
13		1/17/2021	210115N010	3600	2.00	
14		1/17/2021	210115N011	3600	2.20	
15		1/17/2021	210115N012	3600	3.20	
16	4	1/17/2021	210115N013	3580	3.00	17920
17		1/17/2021	210115N014	3600	2.40	
18		1/17/2021	210115N015	3580	2.80	
19		1/17/2021	210115N016	3560	3.00	
20		1/17/2021	210115N017	3600	3.00	
21	5	1/17/2021	202210116D-1	3620	1.90	18430
22		1/17/2021	202210116D-2	3600	2.60	
23		1/17/2021	202210116D-3	3600	2.40	
24		1/17/2021	202210116D-4	3610	2.60	
25		1/17/2021	202210116D-9	4000	2.80	
26	6	1/18/2021	20210116D10	2760	1.60	18790
27		1/18/2021	20210116D11	1970	1.60	
28		1/18/2021	20210116D12	4700	1.80	
29		1/18/2021	20210116D13	4680	2.00	
30		1/18/2021	20210116N1	4680	1.80	
31	7	1/18/2021	20210116N2	4630	3.20	18520
32		1/18/2021	20210116N3	4630	3.20	
33		1/18/2021	20210116N4	4600	3.20	
34		1/18/2021	20210116N5	4660	2.60	
35	8	1/18/2021	20210116N6	4630	3.00	18610
36		1/18/2021	20210116N7	4620	3.20	
37		1/18/2021	20210116N8	4680	2.00	
38		1/18/2021	20210116N9	4680	3.00	
39	9	1/18/2021	210117D11	4630	2.40	18750
40		1/18/2021	210117D12	4720	2.40	
41		1/18/2021	210117D13	4700	26.00	
42		1/18/2021	210117D14	4700	1.80	

TSW 4.76*0.7 GSG SPCD PACKING DETAIL

43	10	1/18/2021	210117D6	4720	2.00	18850
44		1/18/2021	210117D7	4720	1.90	
45		1/18/2021	210117D8	4700	2.60	
46		1/18/2021	210117D9	600	1.60	
47		1/18/2021	210117D10	4110	1.60	
48	11	1/18/2021	210117D2	4450	2.40	17810
49		1/18/2021	210117D3	4650	3.20	
50		1/18/2021	210117D4	3990	3.20	
51		1/18/2021	210117D5	4720	2.00	
52	12	1/18/2021	210116N10	4630	3.00	18550
53		1/18/2021	210116N11	4650	2.20	
54		1/18/2021	210116N12	4630	3.40	
55		1/18/2021	210117D1	4640	3.00	
56	13	1/19/2021	20210117N1	4580	2.80	17540
57		1/19/2021	20210117N2	3520	1.50	
58		1/19/2021	20210117N3	10	1.50	
59		1/19/2021	20210117N4	4730	2.20	
60		1/19/2021	20210117N5	4700	2.40	
61	14	1/19/2021	20210117N6	4590	2.50	18650
62		1/19/2021	20210117N7	4760	2.50	
63		1/19/2021	20210117N8	4600	2.20	
64		1/19/2021	20210117N9	4700	2.00	
65	15	1/19/2021	20210117N10	4720	2.00	18440
66		1/19/2021	20210117N11	4570	3.00	
67		1/19/2021	20210117N12	4580	2.60	
68		1/19/2021	20210117N13	4570	2.20	
69	16	1/19/2021	20210117N14	4520	2.00	18260
70		1/19/2021	20210117N15	4570	2.20	
71		1/19/2021	20210117N16	4570	2.20	
72		1/19/2021	20210117N17	4600	2.00	
73	17	1/19/2021	210118D001	4350	2.80	17390
74		1/19/2021	210118D002	4350	3.00	
75		1/19/2021	210118D003	4330	2.80	
76		1/19/2021	210118D004	4360	3.00	
NO.1 CONTAINER MSKU7185935					TOTAL	310570 MTR

TSW 8.0*0.7 GSG K3 PACKING DETAIL

No.	Box no	packing date	Coil number	quantity	total quantity
1	1	1/11/2021	18NC210111DK001	2560	6560
2		1/11/2021	18NC210111DK002	2550	
3		1/18/2021	18NC210118DK001	1450	
4	2	1/18/2021	18NC210118DK002	2720	6900
5		1/18/2021	18NC210118DK003	1340	
6		1/18/2021	18NC210118DK004	2840	
7	3	1/18/2021	18NC210118DK005	2840	7080
8		1/18/2021	18NC210118DK006	2830	
9		1/18/2021	18NC210118DK007	1410	
10	4	1/18/2021	18NC210118DK008	2710	6110
11		1/18/2021	18NC210118DK010	2080	
12		1/18/2021	18NC210118DK009	1320	
13	5	1/18/2021	18NC210118DK011	2550	7160
14		1/18/2021	18NC210118DK013	2540	
15		1/18/2021	18NC210118DK012	2070	
16	6	1/18/2021	18NC210118DK014	2550	6230
17		1/18/2021	18NC210118DK015	2190	
18		1/18/2021	18NC210118DK016	1490	
19	7	1/18/2021	18NC210118DK017	2570	7900
20		1/18/2021	18NC210118DK018	2840	
21		1/18/2021	18NC210118DK019	2490	
NO.1 CONTAINER MRKU0976465				TOTAL	47940 MTR

TSW 4.76*0.7 GSG SPCD PACKING DETAIL

No.	pallet no	packing date	Coil number	quantity	nitrogen precharge pressure (MPa)	total quantity
1	1	1/19/2021	210118D005	4500	3.00	18340
2		1/19/2021	210118D006	4560	2.80	
3		1/19/2021	210118D007	4680	2.00	
4		1/19/2021	210118D008	4600	3.00	
5	2	1/19/2021	210118D009	5310	2.80	19120
6		1/19/2021	210118D010	4600	2.60	
7		1/19/2021	210118D011	4600	2.60	
8		1/19/2021	210118D012	4610	2.80	
9	3	1/20/2021	20210118N9	4600	3.20	18350
10		1/20/2021	20210118N10	4580	2.00	
11		1/20/2021	20210118N11	4590	2.80	
12		1/20/2021	20210118N12	4580	2.40	
13	4	1/20/2021	20210118N1	4610	2.80	19180
14		1/20/2021	20210118N2	4500	3.00	
15		1/20/2021	20210118N3	4730	2.40	
16		1/20/2021	20210118N4	5340	2.20	
17	5	1/20/2021	20210118N5	5310	2.20	19670
18		1/20/2021	20210118N6	5260	2.00	
19		1/20/2021	20210118N7	4520	3.20	
20		1/20/2021	20210118N8	4580	2.20	
21	6	1/20/2021	210119D11	4620	2.00	18840
22		1/20/2021	210119D10	4620	2.60	
23		1/20/2021	210119D9	4300	2.00	
24		1/20/2021	210119D8	5300	2.80	
25	7	1/20/2021	210119D4	4570	2.60	19040
26		1/20/2021	210119D5	4600	2.60	
27		1/20/2021	210119D6	4570	2.80	
28		1/20/2021	210119D7	5300	2.80	
NO.1 CONTAINER MSKU7843403					TOTAL	132540 MTR

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.05

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: 1-2021-01-26-006

ITEM / SIDE: TSW GSG COIL / Ø 4.76 X 0.7 T

DESCRIPTION: SIMPLE NOT-ALLOYED WALL STEEL TUBE

WITH WELDING WITH ZINC COATING

SPECIFICATION: Q/QSPM005-2016/ASTM A053

QTY: 310570M

NET WEIGHT: 21554kg

LOT NO: 2021.01.17~2021.01.19

R.MATERIALS: SPCD

SPEC: QSPM104

COUNTRY OF ORIGIN: CHINA

[CHEMICAL COMPOSITION(%)]

C	Si	Mn	P	S
< 0.10	TR	< 0.45	< 0.035	< 0.035
0.0022	0.0010	0.0990	0.0116	0.0036

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
DIMENSION	OUTS. DIA.	Ø 4.76 ± 0.08	4.74	4.78	4.80	4.76	4.79	4.77	0.K
	WALL THICK.	0.70 t ± 0.08	0.66	0.68	0.69	0.65	0.67	0.67	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 25kgf/mm²	28.00	28.00	27.00	26.00	27.00	27.20	0.K
	YIELD POINT	> 15kgf/mm²	17.00	17.00	16.00	15.00	16.00	16.20	0.K
PHYSICAL TEST	ELONGATION	> 30%	41.00	34.00	38.00	36.00	39.00	37.60	0.K
	HARDNESS	Hv < 120	93.00	90.00	95.00	92.00	91.00	92.20	0.K
	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after out dia. Increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 250kgf/cm² for 5 minute no leaking Burst pressure 800 kgf/cm² over	0.K	0.K	0.K	0.K	0.K	0.K	0.K	0.K
FLATTENING TEST	Free from crack, groove (D=3T)	0.K	0.K	0.K	0.K	0.K	0.K	0.K	0.K
EXPANSION TEST	Free from crack, flaw	0.K	0.K	0.K	0.K	0.K	0.K	0.K	0.K
CORROSION RESISTANCE	RED RUST	NSS 360 Hr No red rust	0.K	0.K	0.K	0.K	0.K	0.K	0.K
COATING THICKNESS	COATING THICKNESS	MIN ≥ 5μm	13.4	11.1	10.2	10.6	9.8	11.02	0.K
CLEANLINESS	WATER	≤ 0.35mg/M	0.10mg/M	0.10mg/M	0.08mg/M	0.09mg/M	0.10mg/M	0.09mg/M	0.K
	OIL	≤ 0.10mg/M	0.0158mg/M	0.0159mg/M	0.0158mg/M	0.0155mg/M	0.0157mg/M	0.0157mg/M	0.K
	IMPURITY	WEIGHT ≤ 0.10mg/M, SIZE ≤ 140um	0.02mg/M, SIZE : 76.38 μm	0.03mg/M, SIZE : 76.38 μm	0.03mg/M, SIZE : 76.29 μm	0.02mg/M, SIZE : 76.38 μm	0.02mg/M, SIZE : 76.37 μm	0.02mg/M, SIZE : 76.38 μm	0.K
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K

TOTAL RESULT	ACCEPTED	SIGNED:	QUALITY MANAGEMENT TEAM MANAGER
		王波 2021.02.05	

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Cheng Ti Xiang

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.05

CUSTORMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: 1-2021-01-26-006

ITEM / SIDE: TSW GSG COIL / Ø 8.0X 0.7 T -K3

DESCRIPTION: SIMPLE NOT-ALLOYED WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING WITH ZINC COATING

C	Si	Mn	P	S
< 0.15	TR	< 0.60	< 0.050	< 0.050
0.0466	0.0050	0.2350	0.0076	0.0062

SPECIFICATION: Q/QSPM005-2016/ASTM A053

QTY: 47940M

NET WEIGHT: 5959kg

LOT.NO: 2021.01.11~2021.01.18

R.MATERIALS: SPCC

SPEC: QSPM104

COUNTRY OF ORIGIN: CHINA

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
DIMENSION	OUTS. DIA.	Ø 8.00 ± 0.08	7.97	8.04	7.99	8.03	8.02	8.01	0.K
	WALL THICK.	0.70 t ± 0.08	0.67	0.70	0.66	0.69	0.68	0.68	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm²	33.00	33.00	34.00	34.00	34.00	33.60	0.K
	YIELD POINT	> 18 kgf/mm²	25.00	25.00	26.00	26.00	26.00	25.60	0.K
	ELONGATION	> 15 %	35.00	36.00	34.00	33.00	35.00	34.60	0.K
	HARDNESS	Hv < 150	120.00	119.00	116.00	113.00	117.00	117.00	0.K
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 2.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after out dia. increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	WORKING PRESSURE (BURST PRESSURE)	Ø 8.0 200kgf/cm² for 5 minute no leaking Burst pressure 460 kgf/cm² over	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLATTENING TEST	Free from crack, groove (D=3T)	0.K	0.K	0.K	0.K	0.K	0.K	0.K
CORROSION RESISTANCE	RED RUST	NSS 360 Hr No red rust	0.K	0.K	0.K	0.K	0.K	0.K	0.K
COATING THICKNESS	COATING THICKNESS	MIN ≥ 5µm	9.5	11.3	11.9	10.3	9.2	10.44	0.K
	INNER COATING THICKNESS	Copper MIN ≥ 3µm	5.40	5.60	4.90	4.80	5.20	5.18	0.K
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
TOTAL RESULT	ACCEPTED	SIGNED: 	QUALITY MANAGEMENT TEAM MANAGER						

1 / 1

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007C1

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: 1-2021-01-05-008

ITEM / SIDE: TSW GSG COIL / Ø 4.76 X 0.7 T

DESCRIPTION: SIMPLE NOT-ALLOYED WALL STEEL TUBE

WITH WELDING WITH ZINC COATING

SPECIFICATION: Q/QSPM005-2016/ASTM A053

QTY: 132540M

NET WEIGHT: 9198kg

LOT NO: 2021.01.19~2021.01.20

R.MATERIALS: SPCD

SPEC: QSPM104

COUNTRY OF ORIGIN: CHINA

[CHEMICAL COMPOSITION(%)]

C	Si	Mn	P	S
< 0.10	TR	< 0.45	< 0.035	< 0.035
0.0022	0.0010	0.0990	0.0116	0.0036

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
DIMENSION	OUTS. DIA.	Ø 4.76 ± 0.08	4.77	4.80	4.79	4.76	4.75	4.77	0.K
	WALL THICK.	0.70 t ± 0.08	0.66	0.69	0.65	0.67	0.68	0.67	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 25kgf/mm²	28.00	30.00	28.00	27.00	27.00	28.00	0.K
	YIELD POINT	> 15kgf/mm²	17.00	19.00	17.00	16.00	16.00	17.00	0.K
	ELONGATION	> 30%	40.00	36.00	38.00	40.00	41.00	39.00	0.K
	HARDNESS	Hv < 120	91.00	91.00	89.00	93.00	92.00	91.20	0.K
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after cut dia. increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 250kgf/cm² for 5 minute no leaking Burst pressure 800 kgf/cm² over		0.K	0.K	0.K	0.K	0.K	0.K	0.K
FLATTENING TEST	Free from crack, groove (D=3T)		0.K	0.K	0.K	0.K	0.K	0.K	0.K
EXPANSION TEST	Free from crack, fiaw		0.K	0.K	0.K	0.K	0.K	0.K	0.K
CORROSION RESISTANCE	RED RUST	NSS 360 Hr No red rust	0.K	0.K	0.K	0.K	0.K	0.K	0.K
COATING THICKNESS	COATING THICKNESS	MIN ≥ 5µm	11.3	11.2	10.5	9.3	11.4	10.74	0.K
	WATER	≤ 0.35mg/M	0.10mg/M	0.10mg/M	0.08mg/M	0.09mg/M	0.10mg/M	0.09mg/M	0.K
CLEANLINESS	OIL	≤ 0.10mg/M	0.0158mg/M	0.0159mg/M	0.0158mg/M	0.0155mg/M	0.0157mg/M	0.0157mg/M	0.K
	IMPURITY	WEIGHT ≤ 0.10mg/M, SIZE ≤ 140um	0.02mg/M, SIZE : 76.38 µm	0.03mg/M, SIZE : 76.38 µm	0.03mg/M, SIZE : 76.29 µm	0.02mg/M, SIZE : 76.38 µm	0.02mg/M, SIZE : 76.37 µm	0.02mg/M, SIZE : 76.38 µm	0.K
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K

TOTAL RESULT	ACCEPTED	SIGNED:	QUALITY MANAGEMENT TEAM MANAGER
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Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0006

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 5000 MM

DESCRIPTION: DOUBLE WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION : Q/QSPM006-2016 / ASTM A053

QTY: 10900 EA

NET WEIGHT: 3850KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
DIMENSION	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	0.K
	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	0.K
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	5000.0	5000.0	5000.0	5000.0	5000.0	5000.00	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	0.K
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	0.K
	ELONGATION	> 25%	27	25	27	26	26	26.2	0.K
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	0.K
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after out dia. increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	0.K
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	0.K
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	0.K
COATING TEST	HOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	0.K
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	0.K
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	0.K
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	0.K
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (50cycle)	OK	OK	OK	OK	OK	OK	0.K
	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	0.K
CORROSION RESISTANCE	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	0.K
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	0.K
COATING THICKNESS	METAL COATING THICKNESS	Zinc MIN ≥ 25μm	26.00	25.00	25.00	25.00	26.00	25.40	0.K
	RESIN COATING THICKNESS	PVF MIN ≥ 15μm, AVG ≥ 25μm	26	27	26	26	28	26.8	0.K
	INNER COATING THICKNESS	Copper MIN ≥ 3μm	5.5	5.3	5.2	4.8	5.5	5.26	0.K
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	0.K
TOTAL RESULT	ACCEPTED	SIGNED : 	QUALITY MANAGEMENT TEAM MANAGER						

Qingdao SeAH Precision Metal CO.,LTD

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Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 2247 MM

DESCRIPTION: DOUBLE WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 800EA

NET WEIGHT: 127KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	OK	OK	OK	OK	OK	OK	OK
	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	OK
DIMENSION	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	OK
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	2247.0	2247.0	2247.0	2247.0	2247.0	2247.00	OK
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	OK
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	OK
	ELONGATION	> 25%	27	25	27	26	26	26.2	OK
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	OK
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	OK	OK	OK	OK	OK	OK	OK
	FLARING TEST	No groove & crack after out dia. Increased by 20%	OK	OK	OK	OK	OK	OK	OK
COATING TEST	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	OK	OK	OK	OK	OK	OK	OK
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	OK	OK	OK	OK	OK	OK	OK
	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	OK
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	OK
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	OK
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	OK
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	OK
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (5cycle)	OK	OK	OK	OK	OK	OK	OK
CORROSION RESISTANCE	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	OK
	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	OK
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	OK
COATING THICKNESS	METAL COATING THICKNESS	Zinc MIN ≥ 25μm	26.00	25.00	25.00	25.00	26.00	25.40	OK
	RESIN COATING THICKNESS	PVF MIN ≥ 15μm, AVG ≥ 25μm	26	27	26	26	28	26.8	OK
	INNER COATING THICKNESS	Copper MIN ≥ 3μm	5.5	5.3	5.2	4.8	5.5	5.26	OK
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	OK
TOTAL RESULT	ACCEPTED	SIGNED:	QUALITY MANAGEMENT TEAM MANAGER						

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 2346 MM

[CHEMICAL COMPOSITION(%)]

DESCRIPTION: DOUBLE WALL STEEL TUBE

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 800EA

NET WEIGHT: 133KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	OK	OK	OK	OK	OK	OK	OK
	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	OK
DIMENSION	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	OK
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	2346.0	2346.0	2346.0	2345.0	2346.0	2345.80	OK
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	OK
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	OK
	ELONGATION	> 25%	27	25	27	26	26	26.2	OK
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	OK
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	OK	OK	OK	OK	OK	OK	OK
	FLARING TEST	No groove & crack after out dia. increased by 20%	OK	OK	OK	OK	OK	OK	OK
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	OK	OK	OK	OK	OK	OK	OK
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	OK	OK	OK	OK	OK	OK	OK
COATING TEST	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	OK
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	OK
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	OK
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	OK
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	OK
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (5Cycle)	OK	OK	OK	OK	OK	OK	OK
CORROSION RESISTANCE	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	OK
	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	OK
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	OK
COATING THICKNESS	METAL COATING THICKNESS	Zinc MIN ≥ 25μm	26.00	25.00	25.00	25.00	26.00	25.40	OK
	RESIN COATING THICKNESS	PVF MIN ≥ 15μm, AVG ≥ 25μm	26	27	26	26	28	26.8	OK
	INNER COATING THICKNESS	Copper MIN ≥ 3μm	5.5	5.3	5.2	4.8	5.5	5.26	OK
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	OK
TOTAL RESULT	ACCEPTED	SIGNED:	QUALITY MANAGEMENT TEAM MANAGER						

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GP / Ø 4.76 X 0.7 T 2416 MM

[CHEMICAL COMPOSITION(%)]

DESCRIPTION: DOUBLE WALL STEEL TUBE

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 800EA

NET WEIGHT: 137KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	OK	OK	OK	OK	OK	OK	OK
DIMENSION	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	OK
	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	OK
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	2416.0	2415.5	2416.0	2415.5	2416.0	2415.80	OK
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	OK
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	OK
	ELONGATION	> 25%	27	25	27	26	26	26.2	OK
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	OK
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	OK	OK	OK	OK	OK	OK	OK
	FLARING TEST	No groove & crack after out dia. increased by 20%	OK	OK	OK	OK	OK	OK	OK
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	OK	OK	OK	OK	OK	OK	OK
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	OK	OK	OK	OK	OK	OK	OK
COATING TEST	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	OK
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	OK
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	OK
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	OK
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	OK
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (50cycle)	OK	OK	OK	OK	OK	OK	OK
CORROSION RESISTANCE	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	OK
	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	OK
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	OK
COATING THICKNESS	METAL COATING THICKNESS	Zinc MIN ≥ 25µm	26.00	25.00	25.00	25.00	26.00	25.40	OK
	RESIN COATING THICKNESS	PVF MIN ≥ 15µm, AVG ≥ 25µm	26	27	26	26	28	26.8	OK
	INNER COATING THICKNESS	Copper MIN ≥ 3µm	5.5	5.3	5.2	4.8	5.5	5.26	OK
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	OK
TOTAL RESULT	ACCEPTED	SIGNED:					QUALITY MANAGEMENT TEAM MANAGER		

Qingdao SeAH Precision Metal CO., LTD

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Garden Development District, Qingdao City, China

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Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTORMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 1279 MM

DESCRIPTION: DOUBLE WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 1647 EA

NET WEIGHT: 149KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
DIMENSION	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	0.K
	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	0.K
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	1279.0	1279.0	1279.0	1279.0	1279.0	1279.00	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	0.K
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	0.K
	ELONGATION	> 25%	27	25	27	26	26	26.2	0.K
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	0.K
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after out dia. increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	0.K	0.K	0.K	0.K	0.K	0.K	0.K
COATING TEST	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	0.K
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	0.K
	GRAVEL TEST	No red rust within 480hr after chipping 3times	OK	OK	OK	OK	OK	OK	0.K
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	0.K
CORROSION RESISTANCE	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	0.K
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	0.K
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	0.K
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (5cycle)	OK	OK	OK	OK	OK	OK	0.K
COATING THICKNESS	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	0.K
	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	0.K
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	0.K
	METAL COATING THICKNESS	Zinc MIN ≥ 25µm	26.00	25.00	25.00	25.00	26.00	25.40	0.K
RELIABILITY TEST	RESIN COATING THICKNESS	PVF MIN ≥ 15µm , AVG ≥ 25µm	26	27	26	26	28	26.8	0.K
	INNER COATING THICKNESS	Copper MIN ≥ 3µm	5.5	5.3	5.2	4.8	5.5	5.26	0.K
	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	0.K
TOTAL RESULT	ACCEPTED	SIGNED :	QUALITY MANAGEMENT TEAM MANAGER						

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial

Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 2092 MM

DESCRIPTION: DOUBLE WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 1000EA

NET WEIGHT: 148KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
DIMENSION	NO DEFECT	No harmful defect	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	0.K
	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	0.K
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	2092.0	2092.0	2092.0	2092.0	2092.0	2092.00	0.K
MECHANICAL PROPERTIES	TENSILE STRENGTH	> 30kgf/mm ²	32	32	32	31	32	31.8	0.K
	YIELD POINT	> 18kgf/mm ²	23.00	22.00	23.00	23.00	22.00	22.6	0.K
	ELONGATION	> 25%	27	25	27	26	26	26.2	0.K
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	0.K
PHYSICAL TEST	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLARING TEST	No groove & crack after out dia. Increased by 20%	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm ² for 5 minute no leaking Burst pressure 1000 kgf/cm ² over	0.K	0.K	0.K	0.K	0.K	0.K	0.K
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	0.K	0.K	0.K	0.K	0.K	0.K	0.K
COATING TEST	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	OK
	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	OK
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	OK
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	OK
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	OK
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (5cycle)	OK	OK	OK	OK	OK	OK	OK
CORROSION RESISTANCE	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	OK
	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	OK
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	OK
COATING THICKNESS	METAL COATING THICKNESS	Zinc MIN ≥ 25µm	26.00	25.00	25.00	25.00	26.00	25.40	0.K
	RESIN COATING THICKNESS	PVF MIN ≥ 15µm, AVG ≥ 25µm	26	27	26	26	28	26.8	0.K
	INNER COATING THICKNESS	Copper MIN ≥ 3µm	5.5	5.3	5.2	4.8	5.5	5.26	0.K
RELIABILITY TEST	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	OK
TOTAL RESULT	ACCEPTED	SIGNED : 	QUALITY MANAGEMENT TEAM MANAGER						

Qingdao SeAH Precision Metal CO.,LTD

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Attn: Wu Chao

QUALITY CERTIFICATE AND CHEMICAL ANALYSIS REPORT

INVOICE NUM: QSPM-2021-007CI

DATE: 2021.02.08

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

PO/No.: SEAH-MTY-0012

ITEM / SIDE: TDW Z25GPF / Ø 4.76 X 0.7 T 1628 MM

DESCRIPTION: DOUBLE WALL STEEL TUBE

[CHEMICAL COMPOSITION(%)]

WITH WELDING ZINC COATING(BRAZING PROCESS)

SPECIFICATION: Q/QSPM006-2016 / ASTM A053

QTY: 1511EA

NET WEIGHT: 174 KG

LOT.NO: 2021.01.19

R.MATERIALS: SPCC

COUNTRY OF ORIGIN: CHINA

C	Si	Mn	P	S
X100	X100	X100	X1000	X1000
< 15	TR	< 60	< 50	< 50
0.0186	0.0010	0.1980	0.0084	0.0034

CATEGORY	ITEM	SPEC	X1	X2	X3	X4	X5	Avg.	RESULT
APPEARANCE	NO DEFECT	No harmful defect	OK	OK	OK	OK	OK	OK	OK
DIMENSION	OUTS. DIA.	Bare tube: Ø 4.76 ± 0.08 After PVF: Ø 4.82 ± 0.08	4.81	4.83	4.82	4.83	4.81	4.82	OK
	WALL THICK.	Bare tube: 0.70 t ± 0.08 After PVF: 0.75 t ± 0.08	0.69	0.71	0.71	0.70	0.69	0.70	OK
	LENGTH	Non-exact: Spec ± 2.0mm Exact: ≤ 1M ± 0.5mm; 1~2M ± 1.0mm; ≥ 2M ± 2.0mm	1628.0	1628.0	1628.0	1628.0	1628.0	1628.00	OK
	TENSILE STRENGTH	> 30kgf/mm²	32	32	32	31	32	31.8	OK
MECHANICAL PROPERTIES	YIELD POINT	> 18kgf/mm²	23.00	22.00	23.00	23.00	22.00	22.6	OK
	ELONGATION	> 25%	27	25	27	26	26	26.2	OK
	HARDNESS	Hv < 150	100.00	99.00	101.00	100.00	100.00	100.0	OK
	BENDING TEST	Free from crack (360°, 1.5D) Flattening Rate 15%	OK	OK	OK	OK	OK	OK	OK
PHYSICAL TEST	FLARING TEST	No groove & crack after out dia. increased by 20%	OK	OK	OK	OK	OK	OK	OK
	WORKING PRESSURE (BURST PRESSURE)	Ø 4.76 350kgf/cm² for 5 minute no leaking Burst pressure 1000 kgf/cm² over	OK	OK	OK	OK	OK	OK	OK
	FLATTENING AND BEND TEST	Free from crack, groove bending 90° (D=3T)	OK	OK	OK	OK	OK	OK	OK
	RESIN HARDNESS TEST	No scratch at Pencil hardness HB	OK	OK	OK	OK	OK	OK	OK
COATING TEST	ADHESION TEST	No crack & peeling after test	OK	OK	OK	OK	OK	OK	OK
	GRAVEL TEST	No red rust within 480Hr after chipping 3times	OK	OK	OK	OK	OK	OK	OK
	NOT WATER RESISTANCE	Free from Blisters, peeling, deformation(40°C, 480Hr)	OK	OK	OK	OK	OK	OK	OK
	HEAT RESISTANCE	Free from discoloration, cracks (150°C, 24Hr)	OK	OK	OK	OK	OK	OK	OK
CORROSION RESISTANCE	CHEMICAL RESISTANCE(OIL)	Free from softening, cracks, blisters (96Hr) -Gasoline Brake & Mixed Fuel	OK	OK	OK	OK	OK	OK	OK
	CHEMICAL RESISTANCE(ACID)	Free from softening, cracks, blisters (16Hr) -Sulfuric & Chloric	OK	OK	OK	OK	OK	OK	OK
	HEAT CYCLE TEST	Free from cracks, blisters, peeling, deformation & other defects (5Cycle)	OK	OK	OK	OK	OK	OK	OK
	WHITE RUST	NSS 480 Hr No white rust	OK	OK	OK	OK	OK	OK	OK
COATING THICKNESS	RED RUST	NSS 6,000 Hr No red rust	OK	OK	OK	OK	OK	OK	OK
	STRAIGHT BEND -ING(90°, 290°)	Peeling and blister shall be 2.0mm or less(480Hr)	OK	OK	OK	OK	OK	OK	OK
	METAL COATING THICKNESS	Zinc MIN ≥ 25µm	26.00	25.00	25.00	25.00	26.00	25.40	OK
	RESIN COATING THICKNESS	PVF MIN ≥ 15µm, AVG ≥ 25µm	26	27	26	26	28	26.8	OK
RELIABILITY TEST	INNER COATING THICKNESS	Copper MIN ≥ 3µm	5.5	5.3	5.2	4.8	5.5	5.26	OK
	N.D.T (Eddy Current)	No harmful defect	OK	OK	OK	OK	OK	OK	OK
TOTAL RESULT	ACCEPTED	SIGNED : 	QUALITY MANAGEMENT TEAM MANAGER						

CERTIFICATE OF MILL TEST

INVOICE NUM: QSPM-2021-007CL

NUM OF CERTIFICATE:1900619-FC01KS-0029A1-0001/QSPM

DATE: 02/05/2021

COUNTRY : CHINA

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

SUPPLIER:POSCO

 **SeAH** Qingdao SeAH Precision Metal

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road, the south of 6th road, Fuyuan Industrial Garden Development District, Qingdao City, China

Tel: 86-532-8316-6055/Fax: 86-532-8316-6917

Attn: Wu Chao

RoHS Compliance

Size	Product	Quantity	Weight(kg)	Heat No.	Tensile Test			Chemical Composition(%)				
					YP(Mpa)	TS(Mpa)	EL(%)	C	Si	Mn	P	S
0.7x1225xC	CRT466AA	1	13370	SQ02685	167	295	50	0.0022	0.0010	0.0990	0.0116	0.0036
0.7x1225xC	CRT1466B	1	12950	SQ02685	167	295	50	0.0022	0.0010	0.0990	0.0116	0.0036



Certification authorization

CERTIFICATE OF MILL TEST

INVOICE NUM: QSPM-2021-007CL

NUM OF CERTIFICATE:190703-FC01P-0007A1-0001/QSPM

DATE: 2/05/2021

COUNTRY : CHINA

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

SUPPLIER:POSCO

SeAH Qingdao SeAH Precision Metal

Qingdao SeAH Precision Metal CO.,LTD

The west side of 35th road,the south of 6th road,Fuyuan Industrial
Garden Development District,Qingdao City,China

Tel:86-532-8316-6055/Fax:86-532-8316-6917

Attn: Wu Chao

RoHS Compliance

Size	Product	Quantity	Weight(kg)	Heat No.	Tensile Test			Chemical Composition(%)				
					YP(Mpa)	TS(Mpa)	EL(%)	C	Si	Mn	P	S
0.64x945xC	CBS3354	1	14660	SB58276	482	491	7	0.0466	0.0050	0.2350	0.0076	0.0062
0.64x945xC	CBS4422	1	14380	SB53661	482	491	7	0.0466	0.0050	0.2350	0.0076	0.0062



Certification authorization

CERTIFICATE OF MILL TEST

INVOICE NUM: QSPM-2021-007CL

NUM OF CERTIFICATE:1900619-FC01KS-0029A1-0001/QSPM

DATE: 02/08/2021

COUNTRY : CHINA

CUSTOMER: SEAH PRECISION MEXICO S.A DE C.V

SUPPLIER:POSCO

 **SeAH** Qingdao SeAH Precision Metal

Qingdao SeAH Precision Metal CO.,LTD

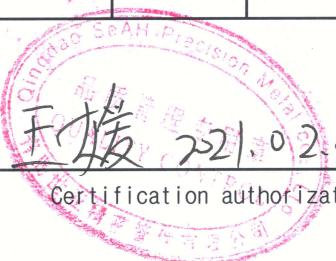
The west side of 35th road,the south of 6th road,Fuyuan Industrial Garden Development District,Qingdao City,China

Tel:86-532-8316-6055/Fax:86-532-8316-6917

Attn: Wu Chao

RoHS Compliance

Size	Product	Quantity	Weight(kg)	Heat No.	Tensile Test			Chemical Composition(%)				
					YP(Mpa)	TS(Mpa)	EL(%)	C	Si	Mn	P	S
0.33x907xC	CRD1595A	1	7250	SQ31021	219	332	41	0.0186	0.0010	0.1980	0.0084	0.0034
0.33x907xC	CRD1597B	1	7220	SQ31021	215	331	42	0.0186	0.0010	0.1980	0.0084	0.0034



Certification authorization