





	3x150 TPH BOILER PACKAGE ALONG WITH STEAM TURBO-BLOWER BUILDING (EXCLUDING ENABLING WORKS), PKG NO:- 011-01A				
	DATA SHEET FOR BOILER FEED WATER PUMP				
<h2>DATA SHEET FOR BFW PUMP</h2>					
REVISION HISTORY					
Rev.	Revision Date	Prepared By	Checked By	Approved By	Description
1	3/9/2013	SUNIL	PRASOON	R.K. SINHA	Issued For Approval
	Owner :				
	BHILAI STEEL PLANT, BHILAI, CHATTISGARH				
	7.0 MTPA EXPANSION				
	Owner's Consultant:				
	MECON LIMITED, RANCHI				
	Contractor: Consortium of				
	FUJIAN LONGKING CO., LTD. No. 81, LINGYUAN ROAD, LONGYAN CITY, FUJIAN PROVINCE, CHINA				
	ALLIED ENERY SYSTEMS PVT. LTD. PLOT NO. 293, KEHAR SINGH ESTATE, WESTEND MARG, SAIDULAJAB, NEW DELHI-110030				
PACKAGE DESCRIPTION	3x150 TPH BOILERS ALONG WITH STEAM TURBO-BLOWER BUILDING (EXCLUDING ENABLING WORK), PKG NO. : 011-01A				
CONTRACTOR DOCUMENT NO.					
Rev. No.	Date	Document No:-		Format	Sheet
1	3/9/2013	BSP-FLCL-05- 011-01A-06-002-01-DE-00108		A4	1

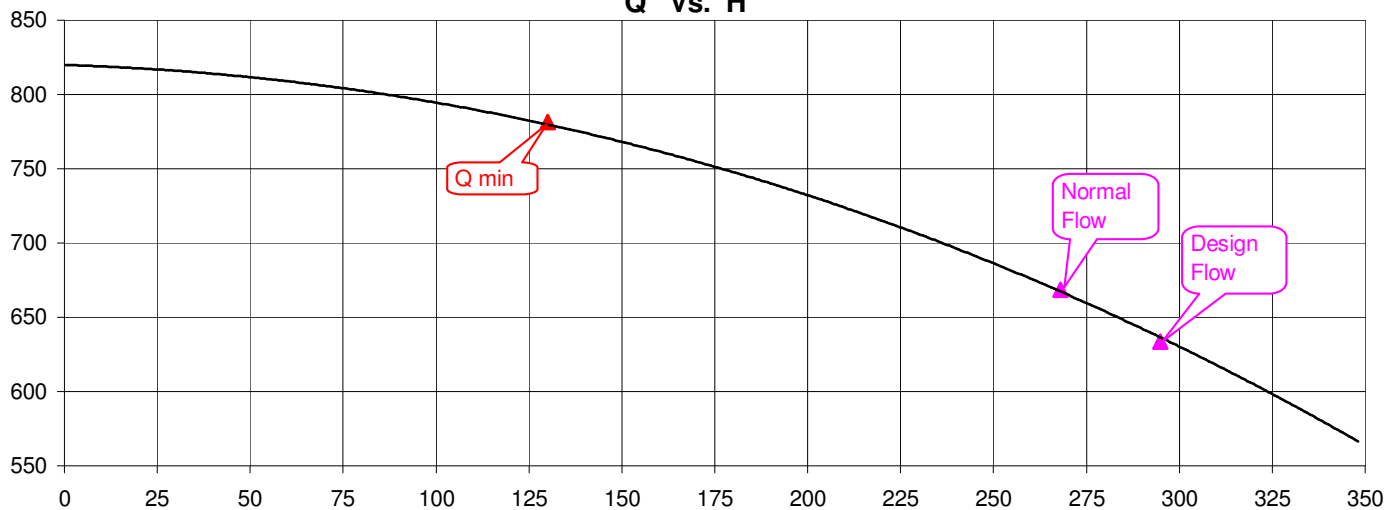
	Client's enquiry No. : E-MAIL	Date : 25.02.2013	Page No. : 1 of 1
	Quotation No. : 04002720441 R6	Date : 11.03.2013	
	Client's LOI / PO No. : 04002720481	Date :	DATASHEET
	Indent No. : 04002720481	Quantity : 4 Nos.	
	SALES ORDER NO. : 9972327489	DELIVERY : 07 MONTHS	
Client's Name & Address :	Plant :	Application : Boiler Feed Pump	
	Project : 3x150TPH Boiler, BSP project	Item No. : --	
	Consultant :	Job No. : --	
M/s .Longking Engg. India P Ltd	Inspection By : M/s Longking Engg. India P Ltd / Consultant / Client	KSB STD QAP	QN11042 PART 0
	Witnessing For : Performance test / Strip test / Dimension check		
	G.A.Drg. No. : --	Pr. Testing Drg. No. : --	
	Seal arrang. No. : --	C/S Drg. No. : --	
	Perfor. Curve No. :	P & I Drg. No. : --	
	Design According to KSB Std.	Test Report No. : --	
ISP/CC No. : 614301100	PUMP TYPE & SIZE : HDB 125/5	Performance Test Std. : HIS	
LIQUID HANDLED : Boiler Feed Water		No. of stages : 5	
LIQUID QUALITY : Ph \geq 9.0 O ₂ < 0.02 ppm	Bearing Housing : NORMAL	Bearings : Pump :- SLEEVE	
Non corrosive to Pump Material		LOD :- ANITFIRCTION	
Rated Temperature : 150 °C	Rated Flow : 268 m ³ /Hr	Shut Off Head (+/-5%) : 821 mtrs.	
Specific Gravity : 0.9169	Rated Head : 668.6 M	Min. Flow (Thermal) : 57 m ³ /Hr	
Kinematic Viscosity : 0.202 cSt	Rated Speed : 2980 RPM	Min. Flow (Cont.) : 130 m ³ /Hr	
Vapour Pressure : 4.87 kg/cm ²	NPSH Pump/Plant # : 6.6 M	Max. BkW @348m3/hr : 684.6 kW	
Suction Pr.(G) : 5.20 kg/cm ²	Efficiency (Hot) \$: 74 %	Driver Make : } Client to specify	
Discharge Pressure (G) : 66.5 kg/cm ²	Rated Power : 607 Kw	Frame Size : }	
Differential Pressure : 61.3 kg/cm ²	Rated Driver Rating : 700 / 720 kW		
DESIGN PARAMETERS: Q: 295m3/hr; H: 634m; EFF:73.3; BKW:636.5 KW; NPSHR: 7.4m; SPEED: 2980rpm			
Casing : Ring Section	Flanges : ASME B16.5	Stuffing Box : HWD	
Nozzle Orientation : Size	Rating : Hyd.Test Pr.	Feet : CF Conn. : G	
Suction : V. Up 150 mm	B 16.5 # 150 15 Kg/cm ²	Std.Curve NO. :	
Discharge: V. Up 125 mm	B 16.5 # 600 120 Kg/cm ²	1820.452/449	
Balancing Line Back to : DEAERATOR	Stage Hyd.Test Pr. : 120 Kg/cm ²	Impeller Dia. : 340X17 mm	
Seal Make : MECH. SEAL	API Plan No. : Medium	Pr. (kg/cm ²) : Temp(oC) : Flow (lpm)	
Mech.Seal Type:	Sealing : --	--	
Size :	Flushing : 23 SELF	--	
Material :	Quenching : 61 Plugged	--	
Control Drg. No. :	Cooling: K1+LOD Water	3 - 5 30 - 35 60-70	
S.No. Part Name Material	S.No. Part Name Material	S.No. Part Name Material	
1 Barrel --	11 Shaft AISI 410 Cr.Plt.	21 Spacer Sleeve AISI 410 (A)	
2 Suction Casing CA6NM	12 Impeller 1.4008.09	22 Stage Bush AISI 410 (H)	
3 Disch. Casing CA6NM	13 Suc. Impeller --	23 Throttle Bush --	
4 Stage Casing CA6NM	14 St.box CA 6NM	24 Balancing Disc A 182 GR F6A cond.B	
5 Stage Casing ----	15 Gland Packing MECH. SEAL	25 Coun.Bal. Disc A 182 GR F6A cond.C	
6 Casing Part --	16 Seal Cover --	26 Bal. Piston --	
7 Inlet Ring --	17 Wearing Ring CR.HARD 400	27 Casing Studs --	
8 Cover --	18 Impeller Ring --	28 Tie Rod 817 M40 (EN 24) V	
9 Diffuser 1.4008.09	19 Stage Sleeve AISI 410 (A)	29 Distributer casing --	
10 Suc. Diffuser --	20 S. P. Sleeve AISI 316	30 Column Pipe --	
Driver : MOTOR	Coupling Type & Size :	Coupling Guard : Normal	
Procurement : CLIENT	Gear type with spacer	Base Frame : With drain collector	
Not to be received at works	Rathi / Equi. Make	Motor Side to be drilled & tapped	
Bearing Lubrication : Ring Oil		Paint : WI 0014010-3BK2	
Execution : OUTDOOR	Direction of pump rotation as seen from drive end : CW	KSB Standard	
Remarks :			
#	CLIENT TO ENSURE THAT NPSH(A)- NPSH(R) \geq 1.5m AT SUCTION NOZZLE AFTER STRAINER LOSSES		
\$	HOT EFFICIENCY CALCULATIONS ACCORDING TO HIS		
	PERFORMANCE TESTING SHALL BE CONDUCTED AT NORMAL PARAMETERS WITH COLD WATER AT KSB TEST BED, WITH TEST BED MOTOR AND TEST BED CONNECTING COUPLING AND AT REDUCED / RATED SPEED. RESULTS OBTAINED WILL BE EXTRAPOLATED FOR RATED TEMPERATURE, SPEED & OTHER DESIGN PARAMETERS. DETAILS OF TEST ARE AS PER ATTACHED QAP.		
	GUARANTEE IS FOR RATED CONDITION ONLY AT KSB TEST BED WITH KSB TEST BED MOTOR		
	WE HAVE SELECTED MOTOR WITH 15% MARGIN ON PUMP RATED POWER.		
	MOTOR RATING WILL BE SUITABLE FOR RUN OUT FLOW OF 348 M3/HR (130% OF NORMAL).		
	SHUT OFF TO RATED RATIO:		
	NOISE LEVEL: 88 DBA AT 1M DISTANCE IN ANY DIRECTION ONLY FOR PUMP		
	MECHANICAL DESIGN TEMPERATURE = 160 DEG. CEL.		
PART LIST NO.:		AGGREGATE NO. :	
	Prepared	Checked	Part list booked
Sign & Date	ATG		
Revision	R6		
Sign Date	11.03.2013		
		Part list released	Aggregate released
		3	4
			5

Pump Performance Curve

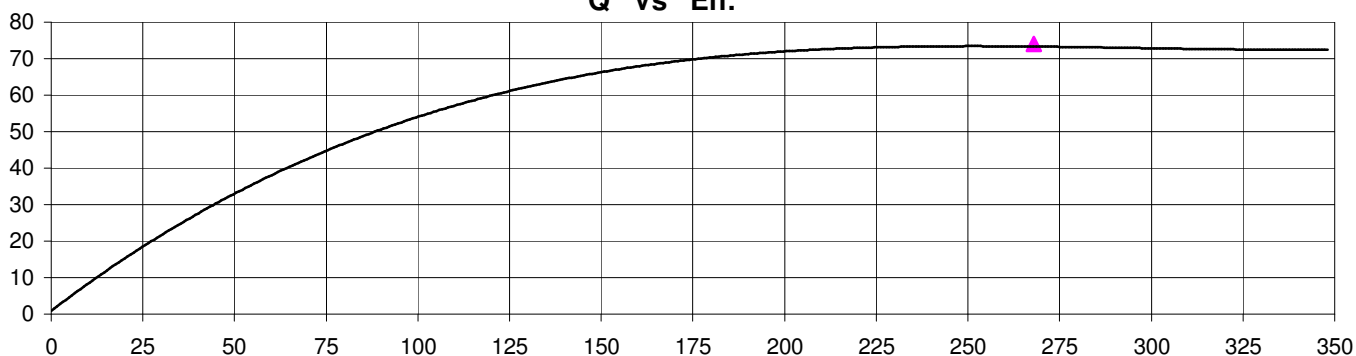
Client	M/s .Longking Engg. India P Ltd			SO NO	9972288496	
Project	3x150TPH Boiler, BSP project			Pump Type	HDB 125/5	
Design Points	Flow m3/hr.	268	Speed (rpm)	2980	Eff. % (Hot)	74
	Head m	668.6	Temp. °C	150	NPSH R (m)	6.6
	Shut off Head	821	Sp. Gr.	0.9169	BKW (Hot)	607



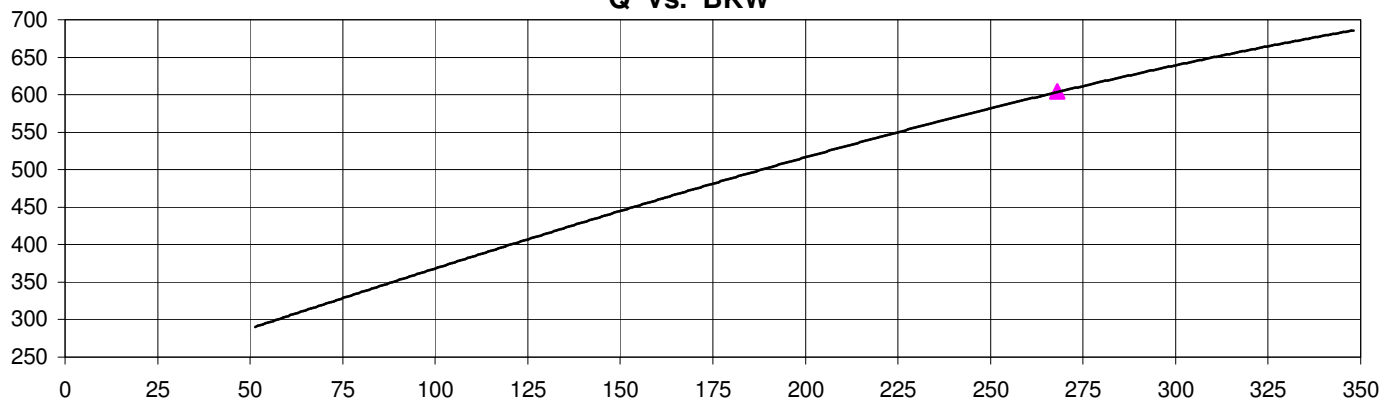
Q Vs. H



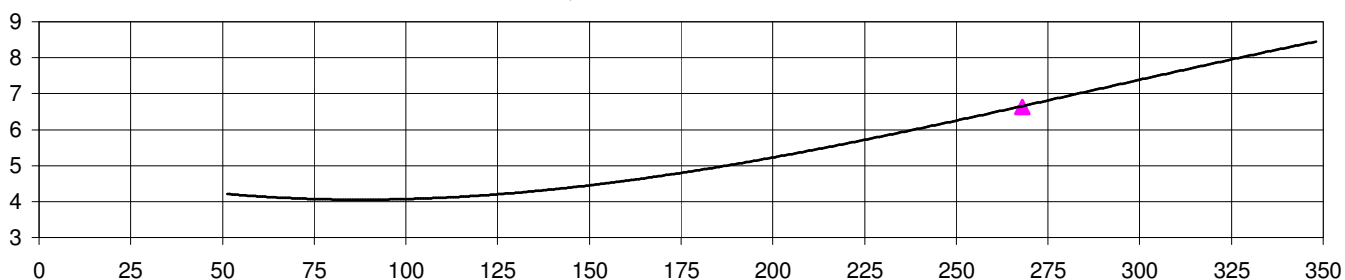
Q Vs Eff.



Q Vs. BKW



Q Vs. NPSHR



Prepared by	Sales Order No	Curve ref.	1820.452/449
ATG	9972327489	Rev.0	Dated 11.03.2013