



PRORITES EQUIPMENTS PVT. LTD.

GAT NO. 83, JYOTIBA NAGAR, TALAWADE, PUNE-411062

TECHNICAL DATASHEET - DOSING SYSTEM

CUSTOMER :	THYSSENKRUP INDUSTRIES INDIA PVT. LTD.	PEPL/DS/073-1/22-23
PROJECT :	1 X 35 TPH BOILER PACKAGE PROJECT AT EID PARR.	DATE : 10.08.2022
PROJECT NO :	41M.0001	REV : R1
COMPONENT	HP DOSING SYSTEM	MAKE
DESCRIPTION	HP DOSING SYSTEM MOUNTED ON A COMMON BASEFRAME WITH TANK, PUMPS, INTERCONNECTING PIPINGS, VALVES, INSTRUMENTS, MATING FLANGES, HARDWARE, GASKETS & FOUNDATION BOLTS.	PRORITES
CHEMICAL	TRISODIUM PHOSPHATE (NA3PO4.12H2O) 1% CONCENTRATION	
DOSING TANK	NET 200 LTR SS304 TANK Ø700 X 850 Ht FLAT END BOTTOM, HINGED COVER WITH DISSOLVING BASKET MESH SIZE #4MM, SHELL THICKNESS - SHELL 3 mm, TOP COVER WITH OBSERVATION HOLE OF BOROSILICATE GLASS WITH 8mm Legs CS.	PRORITES
DOSING PUMP	POSITIVE DISPLACEMENT PLUNGER TYPE WITH MANUAL STROKE ADJUSTMENT. 0-10 LPH ... (R1) / 65 KG/CM2 (G) , MOC WETTED PARTS SS304. QTY = 2 NOS. DESIGN CODE API 675	METACHEM / PRORITES
MOTORS FOR PUMP	TEFC/0.37 kw / 4 pole / Foot Mtg / 415 V / 50 Hz / 3 ph / IE-3/IP55/SAFE AREA = 2 Nos	ABB/ CGL/BBL
EXTERNAL PRV	MOC : FORGED STEEL SS304, 1/2" BSP, Set Pr. 91 Kg/CM2 QTY= 2 Nos	METACHEM / PRORITES
MOTORISED AGITATOR	TOP MOUNTED DIRECTLY COUPLED, SHAFT & IMPELLER MOC SS304, QTY=1	PRORITES
MOTOR FOR AGITATOR	TEFC/6 pole / FLANGE Mtg / 415 V / 50 Hz / 3 ph / IE-3/IP55/SAFE AREA , QTY=1	PRORITES
LEVEL GAUGE	PLAIN TUBULAR WITH GLASS PROTECTION CTC 750, WETTED PARTS SS304. MOUNTING 1/2" #150 QTY =1	PUNE TECHTROL
LEVEL SWITCH	EXTERNAL FLOAT TYPE PIVOTED LEVEL SWITCH. MOUNTING 1/2" #150 QTY =1	PUNE TECHTROL
PRESSURE GAUGE	CHEMICAL SEALED BOURDON TYPE WITH 1/2" ISOLATION VALVE AND SNUBBER. SS 316, RANGE 0-160 KG/CM2 DIAL 150, QTY=2	WIKA / GIC
PULSATION DAMPENER	VOLUME BOTTLE TYPE PULSATION DAMPENER. SS304 = 2 Nos	PRORITES
SUCTION STRAINER	Y TYPE STRAINER, 25 NB,... (R1) FORGED STEEL SS304 = 2 Nos	PRORITES
ISOLATION VALVES FOR LG & LS	BALL VALVE SS 304 , 1/2" #150 QTY 4 Nos	KSB/BDK ... (R1)
SUCTION VALVES	BALL VALVES 25 NB ... (R1) CL 150, SS304, QTY=7 NOS.	KSB/BDK ... (R1)
DISCHARGE VALVES	GATE VALVES 25 NB... (R1) SW CL 600, 3P, CF8 , QTY=2 NOS.	KSB/BDK ... (R1)
DISCHARGE ISOLATION VALVES (PG & SAMPLE LINE)	GLOBE VALVES 25 NB... (R1) SW CL 600, 3P, CF8 , QTY=5 NOS. (2 LOOSE SUPPLY)	KSB/BDK ... (R1)
	GATE VALVES 25 NB SW... (R1) CL 600, 3P, CF8 , QTY=4 NOS.	
NON RETURN VALVE	LIFT CHECK VALVES. 25NB... (R1) SW CL 600, CF8, QTY=3 NOS. (1 LOOSE SUPPLY)	KSB/BDK ... (R1)
SUCTION SIDE PIPING	25 NB... (R1) SCH 40. SA312 TP 304 SEAMLESS	
DISCHARGE SIDE PIPING	25 NB... (R1) SCH 80S. SA312 TP 304 SEAMLESS	
FITTINGS	25 NB ... (R1) CL 3000 SW FITTINGS. SA182 F304	
FLANGES - SUCTION SIDE	25 NB... (R1) SWRF B16.5 CL 150. SA182 F304	
FLANGES - DISCHARGE SIDE	25 NB... (R1) SWRF B16.5 CL 600. SA182 F 304	
HARDWARE	SS 304	
GASKETS	FOR SUCTION SIDE CNF AND FOR DISCHARGE SIDE SPIRAL WOUND GASKET	
FOUNDATION BOLTS	M12 X 200 L - CS	
BASE FRAME	COMMON BASE FRAME FABRICATED FROM ISMC 100 X 50	
OBSERVATION HOLE	YES	
WEATHER HOODS	FOR DRIVE MOTORS & AGITATOR MOTORS SS304	
WEIGHT OF ASSEMBLY	2 TONS	
PAINT (St2)	PRIMER : 2 COAT OF RED OXIDE ZINC PHOSPHATE PRIMER, TOTAL DFT =30μ	
	FINISH PAINT : 2 COAT OF SYNTHETIC ENAMEL, TOTAL DFT =30μ	
	TOTAL DFT =120μ	

NOTE : 1) TWO GLOBE VALVE & ONE NRV WITH SS304 WILL BE PROVIDED AS LOOSE SUPPLY.

For PRORITES EQUIPMENTS PVT LTD.

Pranjali Lanjewar
Engineering

PRORITES EQUIPMENTS PVT. LTD.		
GAT NO. 83, JYOTIBA NAGAR, TALAWADE, PUNE-411062		
PRORITES TECHNICAL DATASHEET - DOSING SYSTEM		
CUSTOMER :	THYSSENKRUP INDUSTRIES INDIA PVT. LTD.	PEPL/DS/073-2/22-23
PROJECT :	1 X 35 TPH BOILER PACKAGE PROJECT AT EID PARR.	DATE : 10.08.2022
PROJECT NO :	41M.0001	REV : R1
COMPONENT	LP DOSING SYSTEM	MAKE
DESCRIPTION	LP DOSING SYSTEM MOUNTED ON A COMMON BASEFRAME WITH TANK, PUMPS, INTERCONNECTING PIPINGS, VALVES, INSTRUMENTS, MATING FLANGES, HARDWARE, GASKETS & FOUNDATION BOLTS.	PRORITES
DOSING TANK	NET 200 LTR SS304 TANK Ø700 X 850 Ht FLAT END BOTTOM, HINGED COVER SHELL THICKNESS - SHELL 3 mm, TOP COVER WITH OBSERVATION HOLE OF BOROSILICATE GLASS WITH 8mm Legs CS.	PRORITES
CHEMICAL	HYDRAZINE (N2H4) 0.6% CONCENTRATION	
DOSING PUMP	POSITIVE DISPLACEMENT PLUNGER TYPE WITH MANUAL STROKE ADJUSTMENT. 0-10 LPH...(R1) /7.5 KG/CM2 (G) , MOC WETTED PARTS SS304. QTY = 2 NOS . DESIGN CODE API 675	METACHEM / PRORITES
MOTORS FOR PUMP	TEFC/0.37 kw / 4 pole / Foot Mtg / 415 V / 50 Hz / 3 ph / IE-3/IP55/ SAFE AREA = 2 Nos	ABB/ CGL/BBL
EXTERNAL PRV	MOC : FORGED STEEL SS304, 1/2" BSP, Set Pr. 11 Kg/CM2 QTY= 2 Nos	METACHEM / PRORITES
MOTORISED AGITATOR	TOP MOUNTED DIRECTLY COUPLED, SHAFT & IMPELLER MOC SS304, QTY=1	PRORITES
MOTOR FOR AGITATOR	TEFC/6 pole / FLANGE Mtg / 415 V / 50 Hz / 3 ph / IE-3/IP55/SAFE AREA , QTY=1	PRORITES
LEVEL GAUGE	PLAIN TUBULAR WITH GLASS PROTECTION CTC 750, WETTED PARTS SS304. MOUNTING 1/2" #150 QTY =1	PUNE TECHTROL
LEVEL SWITCH	EXTERNAL FLOAT TYPE PIVOTED LEVEL SWITCH. MOUNTING 1/2" #150 QTY =1	PUNE TECHTROL
PRESSURE GAUGE	CHEMICAL SEALED BOURDON TYPE WITH 1/2" ISOLATION VALVE AND SNUBBER. SS 316, RANGE 0-21 KG/CM2 DIAL 150, QTY=2	WIKA / GIC
PULSATION DAMPENER	VOLUME BOTTLE TYPE PULSATION DAMPENER. SS304 = 2 Nos	PRORITES
SUCTION STRAINER	Y TYPE STRAINER, 25...(R1) NB, FORGED STEEL SS304 = 2 Nos	PRORITES
SUCTION + DISCHARGE SIDE VALVES	BALL VALVES 25 NB ...(R1) CL 150, SS304, QTY=17 NOS.	KSB/BDK...(R1)
DISCHARGE VALVES (LOOSE SUPPLY)	GLOBE VALVES 25 NB...(R1) SW CL 150, 3P, CF8 , QTY=1NOS.	KSB/BDK...(R1)
	GATE VALVES 25 NB...(R1) SW CL 150, 3P, CF8 , QTY=1 NOS.	
NON RETURN VALVE	LIFT CHECK VALVES. 25NB...(R1) SW CL 150, CF8, QTY=3 NOS. (1 LOOSE SUPPLY)	KSB/BDK...(R1)
SUCTION SIDE PIPING	25 NB...(R1) SCH 40. SA312 TP 304 SEAMLESS	
FITTINGS	25 NB...(R1) CL 3000 SW FITTINGS. SA182 F304	
FLANGES - SUCTION SIDE	25 NB...(R1) SWRF B16.5 CL 150. SA182 F304	
HARDWARE	SS 304	
GASKETS	FOR SUCTION SIDE CNF	
FOUNDATION BOLTS	M12 X 200 L - CS	
BASE FRAME	COMMON BASE FRAME FABRICATED FROM ISMC 100 X 50	
OBSERVATION HOLE	YES	
HOPPER	YES	
WEATHER HOODS	FOR DRIVE MOTORS & AGITATOR MOTORS SS304	
PAINT (St2)	PRIMER : 2 COAT OF RED OXIDE ZINC PHOSPHATE PRIMER, TOTAL DFT =30μ	
	FINISH PAINT : 2 COAT OF SYNTHETIC ENAMEL, TOTAL DFT =30μ	
	TOTAL DFT =120μ	
NOTE : 1) TWO GLOBE VALVE & ONE NRV WITH SS304 WILL BE PROVIDED AS LOOSE SUPPLY....(R1)		
For PRORITES EQUIPMENTS PVT LTD.		
<div></div> <div>Pranjali Lanjewar Engineering</div>		

DESIGN COMMENTS RESPONSE SHEET

Comment Reference & Date:	Mail dated 10.08.2022	Project No.	: 41M.0001
By : MK	Check: SG	Date: 14.08.2021	Project Title : 1 X 35 TPH BOILER PACKAGE PROJECT.
Document Title : 4003-B-01701, Rev. 1			Page : 1 of 2

SERIAL NO.	DOCUMENT NO. (With Revision No.)	COMMENTS	CLARIFICATION	COMMENT STATUS C:Closed, O:Open, H:Hold
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1.	DATASHEET FOR LP	1) Makes of all bought out items shall be as per tkII Spec.Only.	DONE.	Attached with R1 submission
2.		2) Two globe valve & one NRV with SS MOC to be provided as loose supply.	Noted & updated.	
3.		3) All instruments ,valves & accessories shall be as per tkII P&ID.	. Noted & updated.	
4.		4) Please note that operating temp for lp dosing point is 147° C & design is 162° C. Design system accordingly.	Your suggested temperature is working inside the system. This will not affect on chemical inlet and also dosing system design. We will inject the chemical on ambient temperature & system will be around at 65 degree C	
5.		5) Up to inlet of pump & outlet of pump all valves & piping's shall be 25 NB.	Noted & updated.	
6.		6) Chemical hydrazine % conc. To be indicated.	Noted & updated.	
7.		7) Valves KSB/BDK.	Noted & updated.	
8.		8) Painting spec as per tkII	Noted & updated.	
9.		9)		
10.		10)		
11.	DATASHEET FOR HP	1) Makes of all bought out items shall be as per tkII	Noted & updated.	

DESIGN COMMENTS RESPONSE SHEET

Comment Reference & Date:	Mail dated 10.08.2022	Project No.	: 41M.0001
By : MK	Check: SG	Date: 14.08.2021	Project Title : 1 X 35 TPH BOILER PACKAGE PROJECT.
Document Title : 4003-B-01701, Rev. 1			Page : 2 of 2

SERIAL NO.	DOCUMENT NO. (With Revision No.)	COMMENTS	CLARIFICATION	COMMENT STATUS C:Closed, O:Open, H:Hold
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		Spec.Only		
12.		2) Two globe valve & one NRV with SS MOC to be provided as loose supply	Noted & updated.	
13.		3) All instruments ,valves & accessories shall be as per tkII P&ID along with Spec Vendor to confirm	Noted & updated.	
14.		4) Chemical Tri sodium phosphate % conc. To be indicated	Noted & updated.	
15.		5) Valves KSB/BDK.	Noted & updated.	
16.		6) Up to inlet of pump & outlet of pump all valves & piping's shall be 25 NB.	Noted & updated.	
17.		7) Painting spec as per tkII	Noted & updated.	

Project:- 35 TPH TG Boiler	Minutes of Meeting	Project No: 41M.0001
Customer:- E.I.D. Parry		Date: 11.08.2022

Package : Chemical Dosing system

Supplier :

Representatives:

TKII

Mr. Navale Rajkumar
Mr. Ganesh Doke
Mr. Yuvraj Patil
Mr. Nitin Yadnopavit
Mr. Vikash Kumar Panda
Mr. Nikhil Sonawane

SUPPLIER

Mr. Bhavin Gole
Mr. Sachin Kelkar

Reference Documents:

TKII's Enquiry documents:

- TKII specification: 4003-B-01701 dated 01.08.2022 along with its annexures.

Supplier Offer Reference:

Supplier offer No. **PEPL/DS/073-1/22-23/R1 & PEPL/DS/073-2/22-23/R1**

Vendor confirmed full compliance to above mentioned TKII enquiry documents and do not have any deviations except as indicated in enclosed filled-in data sheet. In case of any discrepancy during detailing only points covered in this Record Notes, enclosed data sheet and above referred technical specifications will be treated as final document.

A. Mechanical

1. Vendor informed that he has selected the agitator speed 100 rpm and assured that same is suitable for chemical mixing.
2. Vendor to furnish back up calculation in for sizing the tank capacity considering 24 hours storage during detail engineering.
3. tkII informed that the minimum pipe size for HP Dosing system shall be 25 NB and minimum line size for LP dosing system shall be 25 NB. Vendor confirmed that the same is suitable.
4. Tank MOC shall be SS304, 6 mm thick. The tank sizes for dosing systems are as follows.
HP Dosing tank – 200 Liters
LP dosing tank – 200 Liters
5. Vendor informed that pump make shall be **Metachem / Prorites**
6. All the piping, fittings, flanges, valves are SS304. Complete valve MOC (body & internals) should be SS304
7. Vendor confirmed that Pump liquid end, plunger, relief valves, suction strainers, dissolving baskets shall be of SS 304 Material.

8. Vendor confirmed that MOC of agitator shaft and impeller shall be of SS304.
9. Vendor confirmed that pulsation dampener at each pump discharge shall be of SS316.
10. Vendor confirmed that Level Gauges shall be tubular type. The wetted parts of level gauge shall be stainless steel. Isolation valves & drain valve for each level gauge shall be in vendor's scope.
11. TKII informed that operating temp at dosing point is 147 Deg C and Design Temp at dosing point is 162 Deg C. Vendor confirmed that system is designed accordingly.
12. Vendor to comply with all the operating/design parameters mentioned in tkII specification and mentioned as per MOM.
13. Valves at dosing pump discharge side shall be Globe valves.
14. Make of all bought out items shall be as per technical specification.
15. Vendor confirmed that surface preparation and painting shall be as per tkII Specification
16. Vendor confirmed that foundation bolts for all dosing skids shall be part of Vendor scope of supply.
17. Vendor confirmed to provide dissolving basket for Tri-sodium Phosphate dosing systems.
18. Vendor confirmed to provide Breathing Pot arrangement for Hydrazine dosing system.
19. Vendor confirmed that all flanged ends should be provided with counter flanges, gaskets & necessary hardware.
20. Vendor confirmed that, 2 No. globe valve (25 NB), 2 No. globe valve (25 NB) and 2 No. NRV (25 NB), 2 No. NRV (25 NB), 800 Class (Body & internal-SS MOC) loose supply shall be part of Vendor scope of supply.
21. Following are the details for chemical dosing system:

Location	HP Dosing	LP dosing
	To Drum	To Deaerator outlet
Dosing System	Trisodium phosphate	Hydrazine
Operating / Design temp at dosing point	266 Deg C / 289 Deg C	147 Deg C / 162 Deg C
Tank MOC & Capacity	200 Lit. SS304	200 Lit. SS304
Pump capacity & Pressure	2 No. Dosing pumps, each of 10 LPH, 65 kg/cm2(g),	2 No. Dosing pumps, each of 10 LPH, 7.5 kg/cm2(g)

Instrumentation

1. Vendor confirmed that the level switch on each dosing tank and pressure gauge at outlet of dosing pumps shall meet the requirements as mentioned in tkII specifications. Same shall be considered in offer. Vendor to provide signed and stamped TS provided by tkII.

Electrical

1. Electrical Motor shall be complied as per tkII enquiry specification: 41M.0001-7402-TS-2002-Technical Specifications for LT SC Induction motors_Rev0 -.Signed and stamped specifications shall be provided by vendor.
2. Make of motors shall be ABB/ CGL/ BBL

Q&A

1. Vendor reviewed the MQR document of tkII specification and confirmed acceptance to it. During detail engineering, vendor shall prepare the QAP covering the MQR points and submit the same for tkII approval.
2. Tanks to be hydro-tested at 2 kg/cm²g pressure

LIST OF COMMISSIONING SPARES

Vendor informed that the following **commissioning spares** are considered for Chemical Dosing System supplied. Also informed that any extra commissioning spares required at site (if not considered by the Vendor in anticipation) shall be replenished by the Vendor free of cost directly at the site.

1. Included in system. details will share DDE.
2. _____



TKII

VENDOR