



TECHNICAL PROPOSAL

LIME DOSING PUMP SKID

Project	SIMHADRI SUPER THERMAL POWER PROJECT (2x500 MW+2x500 MW)
Owner	M/s. NTPC Limited
LSTK Contractor	M/s. GE Power
Package Vendor	M/s. Prorites Equipments Pvt. Ltd.
Vendor Offer No.	QTN/PEPL/21-22/74

1	Oct-26-2021	Second Issued	S.K.K	P.J
0	Aug-27-2021	First Issued	S.K.K	P.J
REV	DATE	DESCRIPTION	APP.D	PREP.D

SCOPE OF SUPPLY

- Supply of Lime Dosing Pump for Simhadri FGD Project.

SR. NO.	ITEM	UOM	QTY
A	Lime Dosing Pump Skid	No.	2
1	Lime Dosing Pump	No.	2
2	Drive Motor	No.	2
3	PRV (Pressure Relief Valve)	No.	2
4	Pressure Gauge	No.	2
5	Pulsation Dampener	No.	2
6	Suction Strainer	No.	2
7	Ball Valve (Suction & Discharge Side) 40NB	No.	4
8	Ball Valve (Suction & Discharge Side) 15NB	No.	2
9	NRV (Non Return Valve)	No.	2
10	Piping (Suction & Discharge Side) 40NB	Set.	1
11	Flanges (Suction & Discharge Side) 40NB	Set.	1
12	Fittings (Suction & Discharge Side) 40NB	Set.	1
13	Hardware	Set	1
14	Base Frame	Set	1
15	Canopy	No.	2



LIME DOSING PUMP SKID

TECHNICAL SPECIFICATIONS

SR. NO.	EQUIPMENT	SPECIFICATION
1	Lime Dosing Pump	• Pump Type: - Hydraulically Actuated Single Diaphragm Pump • Model No: - PR60HD • Service: - Lime Solutions • Required Flow Rate (L/H): - 2700 • Suction Pressure (Bar): - Flooded • Discharge Pressure (Bar): - 1.7 • Control Type: - Manual Stroke • Offered Capacity (L/H): - 2806 • Offered Discharge Pressure (Bar): - 1.7 • Turn Down Ratio: - 10:01 • Pump Speed: - 100 SPM • Plunger Dia (mm): - 105 • Gear Ratio: - 15:1 • Stroke Length (mm): - 60 • Port Connection: - 40mm NB BSP • Design Code: - API 675 • Wetted Part MOC: - SS316 • Head MOC: - SS316 • Diaphragm MOC: - PTFE
2	Drive Motor for Lime Dosing Pump	• Type: Squirrel Cage Induction, TEFC, Safe Area • Rating: 2.2 KW • RPM: - 1450 • Power Supply: 415VAC, 3-Phase, 50 HZ • Mounting: Foot Mounted. • Ingress Protection: IP 55 • Area Classification: Non Flame Proof
3	PRV (Pressure Relief Valve)	• Type: Spring Loaded • MOC: SS316 • End Connection: 1" BSP (F). • Set Pressure: - 2.4 kg/cm²

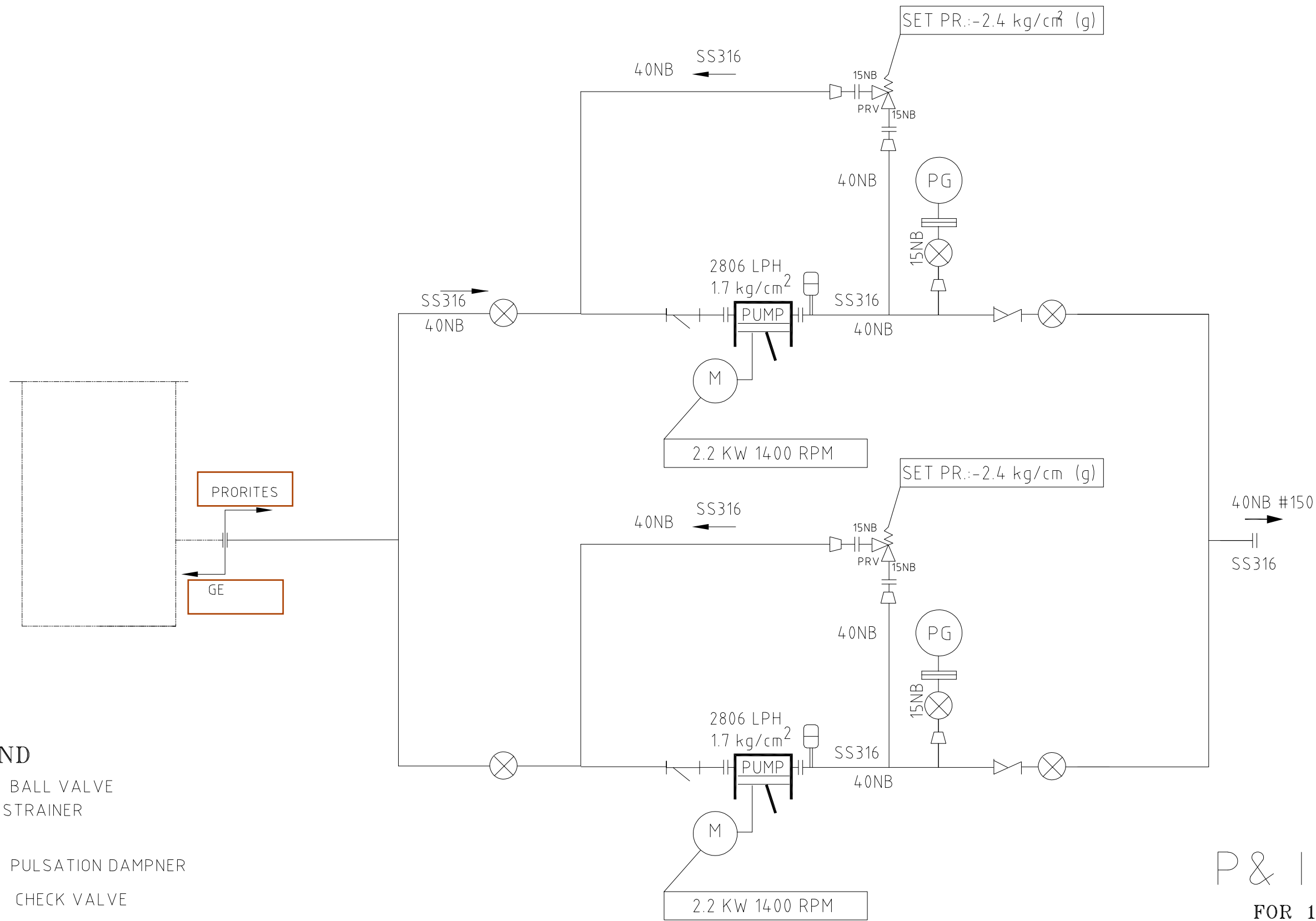
4	Pressure Gauge	- Type: - Bourdon Sensing with Chemical Seal. - Wetted Parts MOC: - SS316 - Dial Size: - 100mm. - Range: - 0 – 4.2 Kg/Cm2 - Enclosure: - IP-66 - Connection: - ½" NPT(M)
5	Pulsation Dampener	- Type: Volume Bottle Type. - MOC: SS316 - Size: 16 Liter
6	Suction Strainer	- Type: Y- Type Strainer. - MOC: SS316 - End Connection: 40NB SW
7	Ball Valve 40NB	- Type: 3 PC Design, Full Port. - MOC: - CF8 / F316 - End Connection: Ends. - SW Class: #600
8	Ball Valve 15NB	- Type: 3 PC Design, Full Port. - MOC: - CF8 / F316 - End Connection: Ends. - SW Class: #600
9	NRV (Non-Return Valve) 40NB	- Type: LIFT CHECK VALVE - PISTON LIFT, BOLTED COVER - MOC: CF8 / F316 - End Connection: 40NB Flange Ends. - Class: #800 - Design Code: API 602
10	Piping 40NB (Suction & Discharge Side)	- Type: Seamless - Size: - 40NB - Thickness: SCH 40 - MOC: SS316 (SA312 TP 316)
11	Flanges 40NB (Discharge Side)	- Type: SWRF, ASME B 16.5 - End Class: #150 - MOC: SS316 (SA182 F316)
12	Fittings 40NB (Suction & Discharge Side)	- Size: - 40NB - End Connection: SW - MOC: SS316 (SA312 TP 316)

13	Hardware, Gasket & Foundation Bolts	• Hardware MOC: - SS304 • Gasket: - CNAF Gaskets • Foundation Bolts: - M12 x 200L – Anchor Bolt
14	Base Frame	• Common base frame fabricated from IS2062 channels.
15	Canopy (Weather wood)	• Canopy for Pump Drive Motors.



APPROVED SUB VENDOR LIST

Sr. No.	EQUIPMENT	APPROVED MAKE	Location
1	Lime Dosing Pump	V.K Pump	India
2	Drive Motor	ABB / CGL / Siemens	India
3	PRV	V.K Pump / Prorites	India
4	Pressure Gauge	GIC / MASS / BAUMER	India
5	Pulsation Dampener	Prorites	India
6	Suction Strainer	Triveni / Prorites	India
7	Ball Valve	L&T / BDK / Micon	India
8	NRV	Micon / BDK / Steel Strong	India



LEGEND

- BALL VALVE
- STRAINER
- PULSATION DAMPNER
- CHECK VALVE

P & I DIAGRAM
FOR 1 NO SKID

REVISION	STATUS	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED

CUSTOMER : GE POWER - STEAM NOIDA  PRORITES EQUIPMENTS PVT LTD. JYOTIBANAGAR, TALAWADE, PUNE-411062 MAHARASHTRA STATE, INDIA	PROJECT: SIMHADRI	
	TITLE: LIME DOSING PUMPING SKID	
LOCATION: INDIA	DRAWING No: PEPL-PID-74-1	
SCALE: 1:1	SHT. 1/1	