



**DRILLING & DEVELOPMENT OF TUBEWELL (PACKAGE-IV)  
AT  
GORAKHPUR, UTTAR PRADESH**

**[NIT NO. : PNP/5001/E/103 DATED 12.01.2018]**



AMENDMENT-1, DATED : 29.01.2018

SL. NO.	REFERENCE OF BIDDING DOCUMENT				AMENDED CLAUSE
	PART/SEC.	PAGE NO.	CLAUSE NO.	EXISTING CLAUSE	
1.	Process Datasheet For Vertical Pumps For Construction Water			-	Process Datasheet Enclosed [Doc. No. : 0000-DD-P101 A/B REV.0]
2.	Bid Closing Date & Time			30.01.2018 at 12:00 Hrs. (IST)	<b>Bid closing date has been extended up to 05.02.2018 at 12:00 Hrs. (IST)</b>
3.	Bid Opening Date & Time			31.01.2018 at 12:00 Hrs. (IST)	<b>Bid Opening date has been extended up to 06.02.2018 at 12:00 Hrs. (IST)</b>

*Sumit Kumar*

**PROJECT MANAGER  
PDIL, NOIDA**

 <b>पी डी आई एल PDIL</b>	<b>PROJECTS &amp; DEVELOPMENT INDIA LTD</b>	0000-DD—P101 A/B	0	
		DOCUMENT NO	REV.	
		SHEET 1 OF 2		

## PROCESS DATA SHEET


### VERTICAL SUBMERGED PUMPS

### FOR CONSTRUCTION WATER

### AMMONIA UREA FERTILIZER PLANT

### HURL, GORAKHPUR

0	16.10.2017	16.10.2017	For Proposal	PM/VKS	RSB/PKB	RKV
REV	REV DATE	EFF DATE	PURPOSE	PREPD	REVWD	APPD

 <b>पी डी आई एल</b> <b>PDIL</b> <b>NOIDA</b>	<b>PROJECT: Ammonia &amp; Urea Fertilizer Plant</b> <b>PLANT: HURL Gorakhpur</b>				0000- P101A/B	0	
					DOCUMENT NO.	REV	
CENTRIFUGAL PUMP SPECIFICATION SHEET				Sheet 2 of 2			
JOB NO. 0000		ITEM: Vertical Submerged Pump			ITEM NO. P-101 A/B		
Project: Ammonia & Urea Fertilizer Plant HURL Gorakhpur			Plant/Section : Offsite & Utility		Reqn./P.O No.		
Applicable to: (√) Proposal ( ) Purchase ( ) As Built		No. Req. 2		Working/Stand by:(1+1)			
Pump Type : ( )Hori ( √) Vert:		Installation : ( )Indoor (√) Outdoor		Duty: (√) Cont ( ) Intermittent			
Driver: (√) Elect Motor ( ) Steam Turbine/Hyd.Turbine		Driver Furnished by: ( )Purchaser (√)Pump Supplier					
Pump Supplier/Manufacturer:		Model:		Sr. No:			
<b>OPERATING CONDITIONS FOR EACH PUMP</b>							
Liquid Handled:	Raw Water	CAPACITY	Rated	150	m <sup>3</sup> /hr	NPSH Req'd.	m
Pumping Temp. min./Nor./max.	33 °C		Nor.		m <sup>3</sup> /hr	Pump speed	RPM
Vapour Pr. at PT:	Kg/cm <sup>2</sup> a	Suction Pressure	Min.		m <sup>3</sup> /hr	Efficiency	%
Spec Gr. at PT min. / nor. / max.	0.95		Max.		Kg/cm <sup>2</sup> g	Rat. Power Consu.(Estimated)	Kw
Viscosity At PT.	0.725 Cp		Nor.	Flooded	Kg/cm <sup>2</sup> g		
pH Value	6-7	Disch. Pr.	Min.		Kg/cm <sup>2</sup> g	Max Power Consu.	Kw
Corrosion Due to	Presence of CO <sub>2</sub>		Diff. Pr (Design).	3.0	Kg/cm <sup>2</sup>	Driver Rating	Kw
Solids in suspen.		Diff.H at Rat. Cap.		m	Driver Speed	RPM	
Max. Particle size		NPSH Available		m	Shut off Head	m	
					Min. Cont .Flow	m <sup>3</sup> /hr	
<b>CONSTRUCTIONAL FEATURES</b>							
Self Priming	Yes/no	Max. allow Casing Pr. Kg/cm <sup>2</sup> G			Jacketing For		
No. of Stages		Hydro Test Pr. Kg/cm <sup>2</sup> G			Cooling Water	Pr.	Kg/cm <sup>2</sup>
Impeller Type		Nozzle	Suction	Discharge	Available	Temp	oC
Imp. Dia Rated	Max.	Size			Cooling Plan No.(API610)		
Casing Type		Rating			Cooling Water Req. m <sup>3</sup> /hr		
Casing Split		Facing			Flushing Plan No.(API 610))		
Rot. Facing Coup. End	cw/ccw	Position			Flushing Medium		FROM DISCHARGE
Casing Support		Shaft Seal			Temp oC		
Casing Drain		Type :Size			Pressure Kg/cm <sup>2</sup>		
Axial Thrust Balanced BY		No. of Packing Rings			Flow m <sup>3</sup> /hr		
Running	Stuffing Box brush	Bearing	Drive End		Base Plate (common)	Type	
	Wearing Rings		No.			Size	
Clearence	Guide Brush	Sleeve Brg. Size			Coup-ling	Manufacturer	
	Balancing Disc/Drum	Lubricator				Type, Rating	
For Vert. Subm. Pump Dim: See Sht.		Lubricant Spec.			Size,Spacerlength		
<b>MATERIAL OF CONSTRUCTION</b>							
Casing	CS	Bearing Brush		Mech. Seal	Cover		
Impeller	CS	Balan. Disc/Drum			Rot. Ring		
Diffuser		Drip Tray			Sea Ring		
Imp. Wearing Ring		Companion Flange			Spring/Bellow		
Cas. Wearing Ring		Tie Rods			Gasket		
Shaft	CS			Stuff. Box	Gland Seal		
Shaft Sleeve					Seal Cage		
Bearing House					Packing		
<b>TESTS &amp; INSPECTION AS PER ES -- 5120</b>		<b>WEIGHTS</b>		<b>DRGS. &amp; DOCUMENTS AS PER ES--5101</b>			
Shop Test	Reqd. For	Witnessed for	Bare Pump	Kg	Out Line Drg. No.		
Performance	Each/ One Pump	Each/ One Pump	Bare Plate	Kg	Sect. Drg. No.		
Hydrostatic	Each/ One Pump	Each/ One Pump	Coupling/Gear Box	Kg	Seal Sect Drg. No.		
NPSH	Each/ One Pump	Each/ One Pump	Driver	Kg	Auxi. Piping Drg. No.		
Disassembly	Each/ One Pump	Each/ One Pump			Test Curve No.		
ACCESSORIES REQD: Base Plate Anchor Bolts Coupling Coupling Guard							
Companion Flang With Gasket				Bolts & Nuts For Comp Flange		() Minimum Return Valve	
REMARKS: 1.Y or Yes indicates applicable 2. Applicable stand: ES--5101 ES --5102.							
	<b>Process Dept.</b>	<b>Date</b>	<b>No.</b>	<b>REVISION</b>		<b>REVISION</b>	
				<b>Signature</b>	<b>Date</b>	<b>No.</b>	<b>Signature</b> <b>Date</b>
Designed by:	PM/VKS	16.10.2017	1.			4.	
Checked by:	RSB/PKB	16.10.2017	2.			5.	
Approved by:	RKV	16.10.2017	3.			6.	