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1. PROJECT:	BRAHMAPUTRA PETROCHEMICAL COMPLEX	SERVICE:	Mixer for * (Equipment Name) FLASH MIXER
2. CUSTOMER:	BCPL	DUTY:	CONTINUOUS
3. JOB NO.:	6907	ITEM NO.:	6907-AG-I-II/III NO. REQD.: 01 NO. PER TANK
4. UNIT NO.:	121	MANUFACTURER:	REMI
5. LOCATION AREA CLASSIFICATION:	Unclassified	MAKE / TYPE / SIZE:	REMI / PGF-10-100

6.0 OPERATING CONDITIONS @

6.1 PURPOSE:	☒ MIXING ☐ STIRRING ☐ SUSPENSION ☐ MAKING HOMOGENOUS ☐ DISSOLUTION
6.2	☐ DISPERSION ☐ CRYSTALLIZATION ☐ EMULSION ☐ HEAT EXCHANGE
6.3 OPERATION:	☒ CONTINUOUS - 24 Hrs./day RETENTION TIME (HR) VARIABLE : FLOW RATE THROUGH VESSEL @ 650 (m3/hr)
6.4	☐ BATCH OPERATION TIME
6.5	☐ FULL TANK ☐ DURING FILLING ☐ DURING EMPTYING
6.6	CONTINUOUS FLOW RATE REQUIRED WITHIN THE VESSEL (m3/hr) MIN: @ RATED: @ MAX: @
6.7	OPERATING PRESSURE (Kg/cm ² g): ATM. OPERT. TEMP (°C): @ 40-50
6.8	FOAM TENDENCY: ☒ NO ☐ YES ☐ STRONG ☐ FAIR ☐ MILD SOLIDS PRESENT: ☐ NO ☒ YES TYPE & SIZE @
6.9	DEGREE OF AGITATION ☐ MILD ☒ MEDIUM ☐ VIOLENT ABRASION: ☐ HIGH ☐ MEDIUM ☐ LOW ☐ NIL
6.10	CORROSIVE PRODUCTS: ☐ NONE ☒ YES TYPE SETTLING: ☐ HIGH ☐ MEDIUM ☒ LOW ☐ NIL; VELOCITY
6.11	PROCESS LIMITATION (IF ANY): ☒ NONE ☐ H.P. ☐ TIP SPEED ☐ SPACE ☐ SEE NOTES

7.0	PRODUCTS TO BE MIXED (IN SEQUENCE)							
7.1	S.NO.	COMPONENT	PERCENTAGE COMPOSITION		VISCOSITY (CST) AT		SP. GRAVITY AT	
7.2			BY VOLUME	BY WEIGHT	OPER. TEMP.	15°C	OPER. TEMP.	15°
7.3		AS PER UEM DATA SHEET	AS PER UEM DATA SHEET	AS PER UEM DATA SHEET	@ 1 cP		@ 1	
7.4								
7.5	AVERAGE PROPERTIES OF MIX		@ SEE NOTE 2					
8.0								

8.1 TANK: ITEM NO.:	#	DRG. NO. #	SUPPLIED BY	☒ OTHERS ☐ VENDOR: LINING ☐ NO ☐ YES; MATERIAL
8.2 VOLUME: #~ 8 M3 (NOM.)	DIA/SIDE (mm) #	ID	HEIGHT/LENGTH (mm): # 2500	THICKNESS (mm): #
8.3 TOP: ☒ OPEN: ☐ CLOSED TYPE ☐ FLAT ☐ CONICAL	MIXER MOUNTING NOZZLE SIZE (mm DIA): BY VENDOR NA			
8.4 BOTTOM: ☐ FLAT ☐ DISHED ☐ CONICAL	DEPTH OF BOTTOM FROM WLF/TANGENT LINE (mm): #			
8.5 BAFFLES: ☒ NO ☐ YES	VENDOR TO SUGGEST TYPE: * RECT. * : NO. * SIZE (L x W x T) (mm) *			
8.6 SPACING FROM WALL (mm): *	HEATING COILS PROVIDE: ☐ NO ☐ YES			
8.7 LIQUID LEVEL (FROM WELD/TANGENT LINE): #	NORMAL: # MIN.: # MAX.: # 2000mm From Tank Bottom			
8.8 #	BIDDER TO SPECIFY AS PER TANK DRAWING ATTACHED WITH TENDER			
8.9 MOUNTING SPACE FOR MIXER *	☐ AVAILABLE ☒ AMPLE ☐ RESTRICTED (mm); ACTUALLY REQD. (mm) *			
8.10 MIXER: LOCATION ☐ SIDE ENTRY ☒ TOP ENTRY ☐ BOTTOM ENTRY ☐ PORTABLE				
8.11 MOUNTING: * ☐ CLAMPED ☐ FLANGED	MOUNTING ANGLE: - CHANNEL (BY CLIENT)			
8.12 SHAFT SEAL: ☐ MECH SEAL ☐ STUFF. BOX ☐ LABYRINTH SEAL ☐ VAPOR SEAL: @				
8.13 MAKE: * TYPE: *	CLASS: *	SIZE: *	MTRL: * NO. OF RINGS: *	LANT. RINGS: ☐ YES ☐ NO
8.14 SHUT-OFF DEVICE WITH NA (A) EQPT. FULL ☐ YES ☒ NO (B) UNDER PRESSURE ☐ YES ☒ NO				

9.0 MATERIALS (VENDOR TO CATEGORICALLY CONFIRM SUITABILITY OF RECOMMENDED MATERIALS)				
9.1 IMPELLER SS304	SHAFT SS304 SERIES	SHAFT SLEEVE: NOT APPLICABLE	AUX. COUPLING: NOT APPLICABLE	
9.2 TANK: RCC	BAFFLES: CS (NA)	MTG. FLANGE: CS	STEADY BEARING: NOT APPLICABLE	
9.3 BOLTS: Wetted parts 304	GASKET: NA	STABILIZER RING: NOT APPLICABLE	HIGH SPEED COUPLING: Not Applicable	
9.4	HS CPLG GUARD: NON SPARKING NA			

10.0 CHARACTERISTICS				
10.1 IMPELLER: TYPE: HYDROFOIL	NO.: 01	DIA: 700 (mm)	SPEED (RPM): ~ 100	
10.2 BLADES: TYPE: A	NO.: 03	PITCH: VARYING WIDTH (mm):		
10.3 MIN. SUBMERGENCE 1000 mm From Tank Bottom	MIN. CLEARANCE FROM THE BOTTOM OF IMPELLER TO TANK BOTTOM (mm): 350			
10.4 SHAFT: DIA (mm): (A) INSIDE TANK ~ 35 mm (B) AT THE BEARINGS / IN STOOL ~ 50 mm	CHROME PLATING: YES / NO			
10.5 LENGTH FROM MIXER FLANGE (mm) 2300	TOTAL LENGTH (mm): 2500 ROTATION FROM IMP. END: * CCW ☒ CW ☐			
10.6 STABILIZER: NA	POWER REQD.: 0.46 HP (Including losses)			
10.7 DRIVE UNIT: TRANSMISSION TYPE ☒ GEAR ☐ BELT ☐ DIRECT COUPLED	AGMA S.F.M. 5 ON MOTOR HP LUBRICATION: OIL SPLASH			
10.8 TYPE OF G. BOX / BELT: In the MAKE: POC / Bon RPM: INPUT/OUTPUT: 1500/100	PERMISS. LOAD: THRUST (KG): * RADIAL (KG): *			
10.9 DISPOSITION OF RED. UNIT: * HORIZONTAL VERT. INCLINED: C/C DISTANCE: * SPEED RATIO: 14:1				
10.10 HIGH SPEED COUPLING: NO TYPE NA MAKE: NA	H.S. COUPLING GUARD: NO			
10.11 LOW SPEED COUPLING: YES TYPE: Rigid mtg MAKE: REMI	AUX. TANK COUPLING: NO / YES TYPE: NA			
10.12 ELECTRIC MOTOR: K.W.: 0.75 SYN. RPM: 1500 RPM AT FULL LOAD 4405	MAKE: 884 G.VOLTS / PHASE / CYCLES: 415 / 3 / 50 HZ			
10.13 ENCL: TEFC MTG. (A) * - HORIZ. VERT. (B) - FOOT	FLANGE * : FRAME SIZE: * INSULATION CLASS: F			
10.14 MTG. FLANGE FOR: (A) TANK: SIZE: * RATING: * FACING: * (B) MIXER: SIZE: NA RATING: NA FACING: NA				

Item No. SED 102 E: CODE - B	A					
	NO.	DATE	REVISION DESCRIPTION		BY	CHK
			MIXER / AGITATOR		AGITATOR DATA SHEET	
			TANKS		REV	
ENGINEERS INDIA LTD. NEW DELHI	28-02-2012		MIXER / AGITATOR		7907-121-16-46-DS-FMTG	
		SHEET 1 OF 2		1		

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11.0	PERFORMANCE		
11.1	HORSE POWER ABSORBED : *	(A) WITH BAFFLE	(B) WITHOUT BAFFLES : 0.46 HP
11.2	BASIS OF POWER CALCULATION :	EEUA AND PAST EXPERIENCED	
11.3	EFFECT OPER. TIME : *	RECYCLE TIME :	TURN-OVER RATE : 20 m ³ /min
11.4	CRITICAL SPEED OF MIXER (RPM)	~ 141.9	OPERATING SPEED AS PERCENTAGE OF CRITICAL SPEED : 91.42
11.5	SEAL FLUSHING : -		
11.6	EFFECTIVE SPHERICAL RADIUS OF AGITATION : THEO : (mm)		
11.7	GUARANTEE FURNISHED :	(A) MECHANICAL YES	(B) PERFORMANCE YES ; (C) SMOOTH OPERATION YES

12.0	TESTING				
12.1	S.NO.	TEST	REQUIRED	WITNESSED	CERTIF. REQD.
12.2	1	MATERIAL CHECK	YES	—	YES
12.3	2	DIMENSIONAL CHECK	YES	—	YES
12.4	3	MECH. RUNNING TEST ON AIR AT SHOP	YES	YES	YES
12.5	4	PERFORMANCE TEST WITH WATER AT SHOP	YES	YES	YES
12.6	5	PERFORMANCE TEST AT SITE (SEE NOTE 11) (BY REM)	YES NO	YES NO	YES NO
12.7	6	STATIC BALANCE	YES	YES	YES
12.8	7	DYNAMIC BALANCE	YES	—	YES
12.9	8	SHUT-OFF	YES	YES	YES
13.0			NO	NO	NO

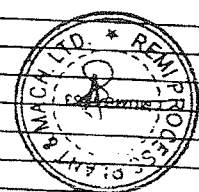
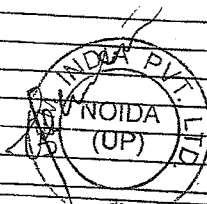
				MISCELLANEOUS			
13.1	MAX. LOAD ON MTG FLANGE DURING OPERATION :			FORCES ~ 28.92	VENDOR : *	MOMENTS :	67 EGM
13.2	WEIGHTS (LB) :	MIXER : *	DRIVER : *				
13.3				ACCESSORIES : *	TOTAL 150 KGS		
13.4							

14.0	SCOPE OF SUPPLY				
14.1	MIXER UNIT WITH ALL NECESSARY ACCESSORIES AND APPURTENANCES				
14.2	ELECTRIC MOTOR WITH CANOPY				
14.3	GEAR REDUCER BELT DRIVE				
14.4	MIXER MTG. FLANGE PLATE				
14.5	AUX. TANK COUPLING * NA				
14.6	HIGH SPEED COUPLING NA				
14.7	SHAFT SEAL AS SPECIFIED NA				
14.8	ANGULAR MOUNTING PIECE				
14.9	SPECIAL TOOLS FOR MAINTENANCE NOT REQUIRED				
14.10	DRIVER ENGG. COORDINATION AND SHOP ASSEMBLY WITH DRIVER				
14.11	FIELD ASSEMBLY				
14.12	DOCUMENTS AND DATA AS SPECIFIED (REFER VENDOR DATA REQUIREMENTS)				

NOTES :

- BIDDER SHALL FILL UP THE DATA MARKED (*, #, @) AND ALL OTHER RELEVANT DATA FOR MIXER AND SUBMIT THE SAME WITH THE BID
- BIDDER TO CONFIRM IF DYNAMIC BALANCING TEST IS A REQUIREMENT FOR THIS ITEM.
- APPLICABLE EIL STANDARD SPEC. : 6-26-0001, JOB SPECIFICATION AND DESIGN GUIDELINES FOR AGITATORS ATTACHED WITH THE MR.
- BIDDER SHALL FURNISH THE EXACT MATERIAL SPECIFICATION FOR ALL MATERIALS QUOTED
- VENDOR SHALL FURNISH SUPPORTING CALCULATIONS JUSTIFYING BKW, SHAFT DIA. SELECTION AND CRITICAL SPEED ETC. AS PER VDR.
- VENDOR SHALL FURNISH ONE NO. CATALOGUE IN ORIGINAL OF ALL EQUIPMENT BEING SUPPLIED & AUXILIARIES INCL GEAR BOX & COUPLINGS
- BIDDER TO FURNISH LIST OF TWO (2) YEARS OPERATION SPARES AND INDICATE IF COMMISSIONING SPARES WILL BE REQUIRED NA
- VENDOR SHALL FURNISH MAKE, MODEL, MATERIALS AND RATING (KW/100 RPM) OF PROPOSED COUPLINGS.
- CONSTRUCTION OF AGITATOR SHALL GIVE EASY MAINTENANCE

* Gear Box : Inline Helical Type . PBL / Bonfiglioli / Eg Make.
*** MOTOR : CGL / BBL / ABB / SIEMENS / or Eg. MAKE



Item No.	*	A	0	NO.	DATE	REVISION DESCRIPTION	BY	CHK	APVD.
						MIXER / AGITATOR FOR <Bidder to fill> TANKS	AGITATOR DATA SHEET		
							REV		
							6907-121-16-46-DS-FWTE		
							SHEET 2 OF 2		