

BULK OIL STORAGE INSTALLATION AT KEAMARI	Spec. No. _____ Prep. By <u>NA</u> Apr. By <u>SMS</u> Date <u>2/8/2018</u> Sheet <u>1 of 1</u> Rev. <u>0</u>
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Applicable To: Proposals Purchase As Built
Note: Indicates Information to be Completed by Purchaser;
 By Manufacturer

For _____	Site _____
Unit _____	Service _____
No. Pumps Req'd <u>2</u> No. Motors Req'd <u>2</u> Provided By _____	Pump Mfr. _____ Mtd By _____
Item No. _____	Item Description Naphtha Export
No. Engines Req'd <u>-</u> No. Turbines Req'd <u>-</u> Provided By _____	Mtd By _____
Item No. <u>-</u>	Item Description _____
Pump Mfr. _____	Size and Type _____ Manufacturer Std. _____ Serial No. _____

OPERATING CONDITIONS, EACH PUMP	PERFORMANCE
Liquid <u>Naphtha</u> US gpm at P.T. Nor. <u>3000</u> Rated _____	Proposal Curve No. _____
Sp. Gravity at P. T. <u>0.75</u> Disch. Press., Psia _____	RPM _____ NPSHR (Water) _____
P.T. °C, Nor. <u>25</u> Max. <u>45</u> Suct. Press., Psia max. _____	Eff. _____ BHP Rated _____
Vap. Press. at P.T, Psia <u>8</u> Diff. Head, Psi. _____	Max. Head Rated IMP _____
Viscosity cP <u>1</u> NPSHA, Ft. _____	Min. Continuous gpm _____
Corr/Eros. Caused by <u>Water</u> Hyd. HP _____	Rotation (Viewed from CPLG End) _____
Location: <input type="checkbox"/> Indoor <input checked="" type="checkbox"/> Outdoor Area: _____	
Working: <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Random	

CONSTRUCTION	SHOP TESTS
Nozzles _____	<input checked="" type="checkbox"/> Non-Wit. Perf. <input type="checkbox"/> Wit. Perf.
Suction _____	<input checked="" type="checkbox"/> Non-Wit. Hydro <input type="checkbox"/> Wit. Hydro
Discharge _____	<input checked="" type="checkbox"/> NPSH Req'd. <input type="checkbox"/> Wit. NPSH
Case-mount: <input type="checkbox"/> Centerline <input type="checkbox"/> Foot <input type="checkbox"/> Bracket <input type="checkbox"/> Vert. (Type) _____	<input type="checkbox"/> Shop Inspection
- Split: <input type="checkbox"/> Axial <input type="checkbox"/> Rad; Type Volute <input type="checkbox"/> SGL <input type="checkbox"/> DBL <input type="checkbox"/> Diffuser	<input type="checkbox"/> Dismant. & Insp. After Test
- Press: <input type="checkbox"/> Max. Allow, _____ psig _____ °F; <input type="checkbox"/> Hydro Test _____ psig	<input type="checkbox"/> Other _____
- Connect: <input checked="" type="checkbox"/> Vent <input checked="" type="checkbox"/> Drain <input type="checkbox"/> Gage <input type="checkbox"/> PSV	
Impeller Dia.: <input type="checkbox"/> Rated _____ <input type="checkbox"/> Max. _____ <input type="checkbox"/> Type: _____	
Mount: <input type="checkbox"/> Between Brgs <input type="checkbox"/> Overhung	
Bearings-type: <input type="checkbox"/> Radial <input type="checkbox"/> Thrust	
Lube: <input type="checkbox"/> Ring Oil <input type="checkbox"/> Flood <input type="checkbox"/> Oil Mist <input type="checkbox"/> Flinger <input type="checkbox"/> Pressure	
Coupling: <input checked="" type="checkbox"/> Mfr. <input type="checkbox"/> Metastream or Eq. <input checked="" type="checkbox"/> Model <input type="checkbox"/> Sparkproof	
Driver Half Mtd By: <input type="checkbox"/> Pump Mfr. <input type="checkbox"/> Driver Mfr. <input type="checkbox"/> Purchaser	
Packing: <input type="checkbox"/> Mfr. & Type _____ <input type="checkbox"/> Size/No. of Rings _____	
Mech. Seal: <input checked="" type="checkbox"/> Mfr. & Model _____ YES _____ API Class. Code _____	
<input type="checkbox"/> Mfr. Code _____	

AUXILIARY PIPING	VERTICAL PUMPS
<input type="checkbox"/> C.W. Pipe Plan _____ <input type="checkbox"/> CU; <input type="checkbox"/> SS; <input type="checkbox"/> Tubing; <input type="checkbox"/> Pipe	Pit or Sump Depth _____
<input type="checkbox"/> Total Cooling Water Req'd, gpm _____	Min. Submergence Req'd. _____
<input type="checkbox"/> Packing Cooling Injection Req'd: <input type="checkbox"/> Total gpm _____ <input type="checkbox"/> psig _____	Column Pipe: <input checked="" type="checkbox"/> Flanged <input type="checkbox"/> Threaded
<input type="checkbox"/> Seal Flush Pipe Plan _____ <input type="checkbox"/> CS <input type="checkbox"/> SS <input type="checkbox"/> Tubing <input type="checkbox"/> Pipe _____	Line Shaft: <input type="checkbox"/> Open <input type="checkbox"/> Enclosed
<input type="checkbox"/> External Seal Flush Fluid _____ <input type="checkbox"/> gpm _____ <input type="checkbox"/> psig _____	Brgs: <input type="checkbox"/> Bowl <input type="checkbox"/> Line Shaft _____
<input type="checkbox"/> Auxiliary Seal Plan _____ <input type="checkbox"/> CS <input type="checkbox"/> SS <input type="checkbox"/> Tubing <input type="checkbox"/> Pipe _____	Brg. Lube <input type="checkbox"/> Water <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Grease
<input type="checkbox"/> Aux. Seal Quench Fluid _____	Float & Rod <input type="checkbox"/> cs <input type="checkbox"/> SSO <input type="checkbox"/> BRZ <input type="checkbox"/> None
	Float Switch <input type="checkbox"/>
	Pump thrust, lb. <input type="checkbox"/> UP <input type="checkbox"/> Down

MOTOR DRIVER	MATERIALS
Est. Power Req'd. _____ Frame _____ Volts/Phase/Cycles <u>400/3/50</u>	Material Class : _____
Type <u>Eexd II C T4</u> Bearings _____ Lube _____	Casing <u>Carbon Steel</u>
Type <u>TEFC</u> Insul. <u>F</u> Full Load Amps _____	Impeller <u>Carbon Steel</u>
Enc <u>Temp. Rise, °C 80</u> Locked Rotor Amps _____	Shaft <u>4140 Alloy Steel</u>
	Baseplate: <input checked="" type="checkbox"/> Yes

- NOTES :
- 1- X : means requirement
 - 2- Electric Motor drivers shall be in accordance with IEC
 - 3- Pump with Motor should be mounted on common base plate by pump manufacturer.
 - 4- Pump suction and discharge nozzles should be of standard size. If non-standard size like 2 1/2", 3 1/2", 5", etc. is provided with pump, then mating flange with next higher standard size reducer shall be provided with pump.
 - 5- At site there is no Cooling Water system and Compressed Air system.