

ADDENDUM TO SPECIFICATION NO.: ST39013 REV.-C

APPLICATION : STEAM TURBINE

ITEM : OIL PURIFICATION UNIT

ADDITIONAL SPECIFICATION :

1. The quality of purified oil at 65 °C shall be as follows.
 - 1.1. Purification level at the outlet of centrifuge shall be equal to or better than class 15/12 as per ISO 4406.
 - 1.2. Moisture contents in purified oil should not increase 500 ppm.
2. An adequately sized anti-flood tank with necessary drain valves along with level gauge and level switch shall be provided.
3. Noise level shall not exceed 85 decibel measured at a distance of 1 meter from the equipment.
4. Drain and vent connections for level switch specified in Annexure-IV to ST39013 shall be NB15(ø21.3X2.6).
5. The inlet, outlet & overflow connections to overflow sight fitting (as per clause 2.2 of BHEL spec. ST39013) shall be NB80(ø88.9X3.96)/NB40(ø48.3X3.96)/NB15(ø21.3X2.6) respectively. Also, it is to be noted that overflow sight fitting is to be supplied loose and the same shall be fitted in BHEL's Main Oil Tank at site.
6. Indirect Heater rating should be 72 KW (Steps: 36KW, 18KW, 18KW) to meet the requirements of clause 5.3 of ST39013.
7. Painting scheme for oil purification unit shall be as below.

<u>Paint (Coat)</u>	<u>Paint Type</u>	<u>No. of coat</u>	<u>DFT*</u>
Primer Paint:	Epoxy base Zinc rich primer paint	2 Coat	70
Intermediate Paint:	Epoxy TiO2 Pigmented Polyamide Cured Paint	1 Coat	70
Finish (Final) Paint:	Aliphatic Acrylic 2 Pack Polyurethane Finish paint	2 Coat	60

Total Minimum DFT= 180

*DFT– Dry Film Thickness (Final) in micron.

Paint Shade shall be as below or as informed later.

- For Oil purifier- Light Blue(RAL 5012)
- For Control Panel- External-Light Grey (shade 631 of IS-5)
Internal- Brilliant White

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8. Five set of each of filled data sheet, drawings, control panel schematic & write-up etc. shall be furnished for approval by BHEL/CUSTOMER after placement of order. Finally, thirteen set(paper based) and 2 set(in CDROM) of O&M manual shall be furnished after approval.
9. For relay based control panel, following additional requirements shall be met.
 - 9.1. Panel construction:
 - Type: Fabricated from cold rolled sheet steel
 - Frame thickness: 2.0 mm
 - Enclosure thickness: 1.6 mm
 - Gland plate thickness: 3.0 mm
 - 9.2. Cables for Motors and heaters shall be adequately sized keeping sufficient margin. Sizes shall be subject to BHEL approval.
 - 9.3. Adequately sized copper ground bus shall be provided for each panel.
 - 9.4. 240 V AC, single phase, thermostatically controlled, space heater shall be provided. For other projects it is subject to change.
 - 9.5. Panel shall be provided with a door switch operated fluorescent lamp and a 240 V AC plug point for panel lighting.
 - 9.6. Cable glands suitable for incoming 415 V feeder cables shall be provided. Sizes will be intimated later.
 - 9.7. Panel shall have 20% spare terminals.
 - 9.8. Data sheets of all instruments, thermostats and motor shall be furnished for BHEL approval.
 - 9.9. Fault level shall be 50 KA RMS for 1 second.
10. Above requirements supersede the corresponding requirements of ST39013.

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