

Bid Document for “Thermal Insulation for SA & RA Ducting with supply of material for HVAC system at ITER- India lab, IPR Campus ”

SCOPE:**Scope of Work**

- a. Removal of old insulation and bituminous adhesive from selected sections of ducts. Duct is shown for reference in Annex A.
- b. Supply & Installation of Nitrile rubber (Elastomeric foam based on nitrile butadiene rubber with reinforced glass cloth covering insulation material) with adhesive as per actual measurement at site.
- c. All Joints/ ends should be properly sealed using Silicon to avoid any ingress of water.
- d. The detailed specifications of Insulation and Adhesive are provided in Annex B.
- e. Disposing the waste insulation material.

Work completion Time

Work completion should not be delayed in any case beyond 6 **weeks** after getting Purchase Order from ITER-INDIA.

Note: Work shall have Warranty of 1 years after the date of final acceptance. If anything is required to rework within this warranty period the vendor shall do it free of cost. Any material required for this has to be arranged by the vendor.

Site

ITER-India Lab,
Institute for Plasma Research
Near Mother Dairy, Bhat Village,
Gandhinagar-382 428, Gujarat, India

Annexure- A**Details of Ducting**

Sample picture of damaged insulation over ducts



Annexure- B**Details of Material to be used****1. Duct Thermal Insulation: (Exposed to sun, outdoor application)**

For Rectangular ducts, flexible insulation material with woven glass fibre covering that provides effective protection against mechanical impact and scratches shall be used as per specifications mentioned below.

Material type: Elastomeric foam based on synthetic rubber (nitrile butadiene rubber) with reinforced glass cloth covering.

- Thermal conductivity of insulation material shall not exceed 0.037 W/(m.K) at mean temperature of 20°C.
- The insulation material shall be Self-extinguishing, does not drip and does not spread flames.
- The insulation material shall withstand maximum service temperature of +85 Deg. C and minimum service temperature of 0 Deg. C.
- Thickness of the insulation shall be 25 mm for SA and 13 mm for RA ducts.
- Density of insulation: 40 – 55 kg/m³

2. Adhesive: Air drying contact adhesive for joining sheet insulations to metal ducting.

Material type: Rubber based contact adhesive in blend of solvents

- Temperature Range: +5°C to +85°C
- Form: Liquid
- Typical Drying Time (airing time): 4-5 minutes
- Typical Setting Time: 36 hours