



BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM :: HYDERABAD-502 032,INDIA
GT DIVISION

Expression of Interest (EOI)

Ref: HY/HPEP/GT/EOI/INS-9FB/2016/0001

Dear Sir,

BHEL Hyderabad invites Expression of Interest (EOI) for Fabrication and installation of insulation for FR9F.05 Gas Turbine "

1.0	Tender Inviting Officer	Mr. B. Rajender Sr Officer (Purchase) BHEL HPEP, Hyderabad Phone: +91 40 23182175 Email: bkrajender@bhelhyd.co.in
2.0	Item Description	Fabrication and installation of insulation for FR9F.05 Gas Turbine "
3.0	Enquiry Number & Date	HY/HPEP/GT/EOI/INS-9FB/2016/0001 Dt 14-05-2016
4.0	Press Notification of the Tender	Press notification on the following News Papers 1. Indian Express (National edition)
5.0	Tender Document availability	Tender documents can be downloaded from the website http://www.bhel.com/tender/view_tender.php?tenderid=27557 Information about the Tender is also published in the following websites: www.bhel.com http://tenders.gov.in NOTE : All corrigenda, addenda, amendments, time extensions, clarifications etc. to the Tender will be hosted on the above websites only. Bidders should regularly visit above websites to keep themselves updated.
6.0	Due Date, Time & Place for Submission of Offer	On or before 24-MAY-2016 by 1000 HRS (IST) This is an E-Tender floated online through our website http://www.bhel.com/tender/tender_nit_search.php = NIT_27557 Please submit your offer as per the guidelines in this document before due date. Offers be sent to the below address DGM /PURCHASE COORDINATION, Vendor complex NEAR ADMINSTRATIVE BUILDING, BHEL, R.C.PURAM, HYDERABAD - 502032 , INDIA Bidder can also submit offer through email at his own risk. The offer to be submitted in two parts. Technical offer to be submitted to technicalbid@bhelhyd.co.in , Interchanging the information in the mails may lead to rejection of the offer.



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		Supplier shall have no claim on e-mail offers sent on any other e-mail ID. BHEL is no way responsible for non-receipt of offers sent through email due to server break down / Internet failure
7.0	Mode of Submission of EOI	The Tender shall be submitted on or before the due date & time as follows: EOI FOR FABRICATION AND INSTALLATION OF INSULATION FOR FR9F.05 GAS TURBINE Following documents shall be submitted 1.Signed copy of Expression of Interest (EOI) for Fabrication and installation of insulation for FR9F.05 Gas Turbine " (this document), 2.Signed copy of Any other Technical document (s).
8.0	Date and Time of Bid Opening.	EOI (Expression of Interest) bid will be opened on 24-MAY-2016 at 1300 HRS Technically qualified vendors will be shortlisted for sending detailed enquiry with NIT terms and conditions along with detailed specifications and drawings after entering into Non-disclosure agreement (NDA) with BHEL.
9.0	EMD/ Tender Fee	No EMD/ Tender fee is applicable for this Tender.



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Introduction:

BHEL Hyderabad manufactures Heavy Duty Gas Turbines, ranging from 25 MW to 300 MW, under a licensing arrangement with General Electric company of USA. The casings, exhaust frame and diffuser of the Fr 9F.05 Gas turbine, which is of 300 MW class, need to be insulated.

Purpose of inviting EOI and mode of selection:

BHEL is presently seeking Expression Of Interest from reputed thermal insulation vendors in India for supply and installation of insulation for Fr 9F.05 Gas turbine casings, exhaust frame, diffuser and expansion joint.

Upon receipt of expression of interest from probable vendors, BHEL will scrutinize the information sought in this EOI and if found acceptable, will be considered for sending formal commercial enquiry from BHEL as per company's procurement and tendering procedures for procurement of above referred insulation. Detailed specifications and drawings will be provided during the formal commercial enquiry and the lowest bidder (L1) is selected through a competitive bidding process for awarding the work. For the purpose of this EOI outline drawings and brief specifications are listed.

Only those vendors need to apply against this EOI who are in the business of supplying and installing thermal insulation for turbine casings and have full-fledged facilities for execution of these jobs. Such vendors should be technically and financially sound with experience of having supplied to Turbines from OEMs like General electric, Siemens, MHI, BHEL etc.

Scope of work:

Fabrication and installation of insulation for FR9F.05 Gas Turbine. The insulation system shall thermally insulate the Gas turbine casings, exhaust frame, diffuser (Internal and External) and Exhaust Expansion Joint (Flex seals) to minimize the gas turbine system heat loss, provide protection to the duct work against thermal stresses, and provide protection for personnel and nearby equipment from the high temperatures of the exhaust system.

Installation of insulation shall be carried out by vendor at BHEL works and site. Unloading and storage of insulation system material at the job site shall be by vendor. Clean up of the job area pre and post installation shall be carried out by vendor.

Material shall be supplied in the form of prefabs, which shall be of removable and reusable type, with proper identification number to ensure readiness of material for installation. Only final trimming shall be carried out at BHEL/site. All fasteners required for installation of insulation shall be arranged by vendor. The prefabs shall be installed on the casings and held in position by pins mounted on the casings and speed clips.

External insulation of Gas turbine casings and exhaust frame : Insulation material shall be mechanically bonded fiber glass felt (Suitable for temperature up to 1200deg F), which shall be encased in fiber glass cloth on all sides. The fiber glass cloth on the hot side (which is in contact with hot surface) shall be vermiculite coated and on the cold side shall be teflon coated as per applicable



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ASME or ASTM standards. The insulation thickness shall be 50.8 mm of one layer. The approximate surface area to be insulated is 100 sq meters.

Average dimensions of the components to be insulated:

S.No	Component	Avg Dia (OD), mm	Length, mm
1	Compressor casing	2175	2800
2	Compressor discharge case	3000	2100
3	Exhaust Frame	4000	1850

External insulation of aft diffuser : Insulation material shall be mechanically bonded Calcia/Magnesia Silicate Insulation encased in fibre glass cloth and Inconel/stainless steel mesh. The final layer shall be covered with aluminium cladding. The insulation thickness shall be 150 mm of 3 layers of 50 mm each. The approximate surface area to be insulated is 70 sq meters.

Average dimensions of the component to be insulated:

OD1=4175mm
OD2=5000 mm
Length= 4750 mm

Internal insulation of aft diffuser : Insulation material shall be mechanically bonded ceramic fibre felt encased in aluminized fibre glass cloth on cold side and stainless steel mesh on hot side. The insulation thickness shall be 76 mm of one layer. The approximate surface area to be insulated is 25 sq meters.

Average dimensions of the component to be insulated:

ID =2200 mm
Length=2500 mm

Insulation of expansion joint (flex seals) : Insulation material shall be mechanically bonded Calcia/Magnesia Silicate Insulation encased in Inconel wire mesh (inner layer), fibre glass cloth (middle layer) and stainless steel wire mesh (outer layer). The insulation thickness shall be 175 mm of 3 layers, 2 layers of 76 mm each and 1 layer of 25 mm.



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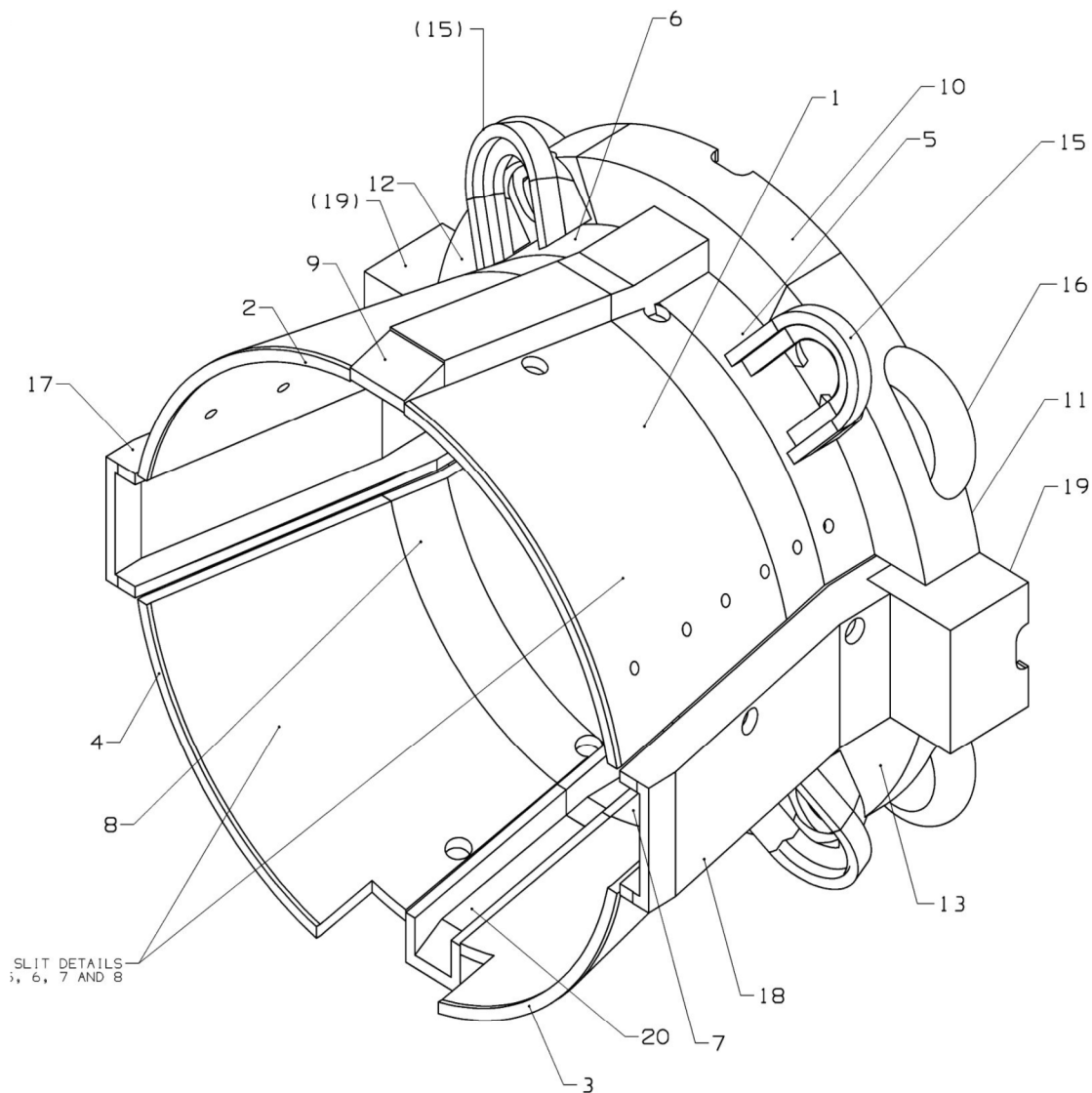
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Pre-qualification criteria

Item description		Supply and installation of Insulation for Fr 9F.05 Gas turbine casings, exhaust frame and diffuser		
Sl no	Pre-qualification criteria	Documentary evidence	Vendor confirmation (Yes/NO)	Remarks
1	Vendors shall be suppliers of removable and reusable type insulation for turbines of OEM's (GE /SIEMENS/MHI/BHEL etc.) atleast for last 2 years. Only Manufacturers'/Authorized Distributors of OEMs' Offers shall be considered for the EOI evaluation. OEM shall give Authorization Letter for distributors for all the range of items and Distributors shall enclose Authorization Letter in the bid, without which their Offer cannot be considered. {OEM - Original Equipment Manufacturer}	Submit unpriced PO copies and quality and inspection documents for these OEMs End user certificates for satisfactory performance for at least last 2 years		
2	Supplier shall submit turn over details for last 3 years which shall be used for assessing supplier's current financial status.	Auditors Report of Balance sheet, Profit & Loss for last 3 years		
3	Manufacturing, assembly and inspection Facilities	List of facilities (self-certified)		
4	Technically qualified vendors will be shortlisted for sending detailed enquiry with NIT terms and conditions along with detailed specifications and drawings after entering into Non-disclosure agreement (NDA) with BHEL.	Confirmation		
5	Documents to be submitted i. Brief profile of the organization ii. Product profile iii. Experience list iv. Technical documentation v. Manpower resources vi. Quality system vii. Vendor/OEM should have ISO 9001. Bidders shall enclose the certifications in their offer.	Self-certified documentation		
6	If any information given by the bidder is found to be incorrect at later stage, BHEL reserves the right to reject the bid submitted by bidder / cancel the award of order. The vendors shortlisted, will be considered for registration with BHEL at www.bhel.com under supplier registration link. http://www.bhel.com/vender_registration/vender.php			
Company Seal:		Authorised Signatory		
		Name:		
		Designation		



External insulation of Compressor casing, Compressor discharge casing and Exhaust Frame



ISOMETRIC VIEW



Compressor discharge casing

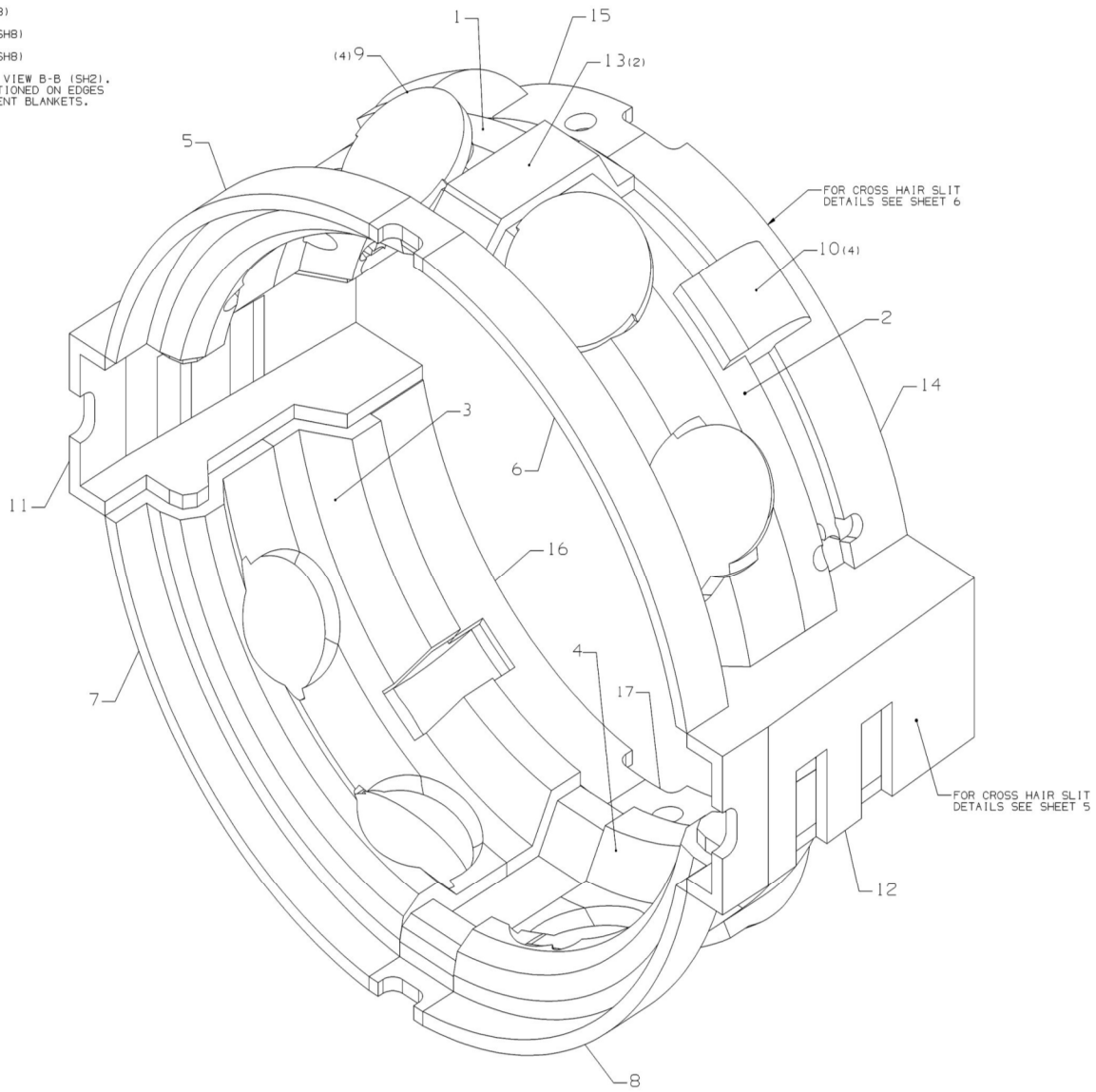
R USE SST
GLASS CLOTH.

(SHB)

R (SHB)

T (SHB)

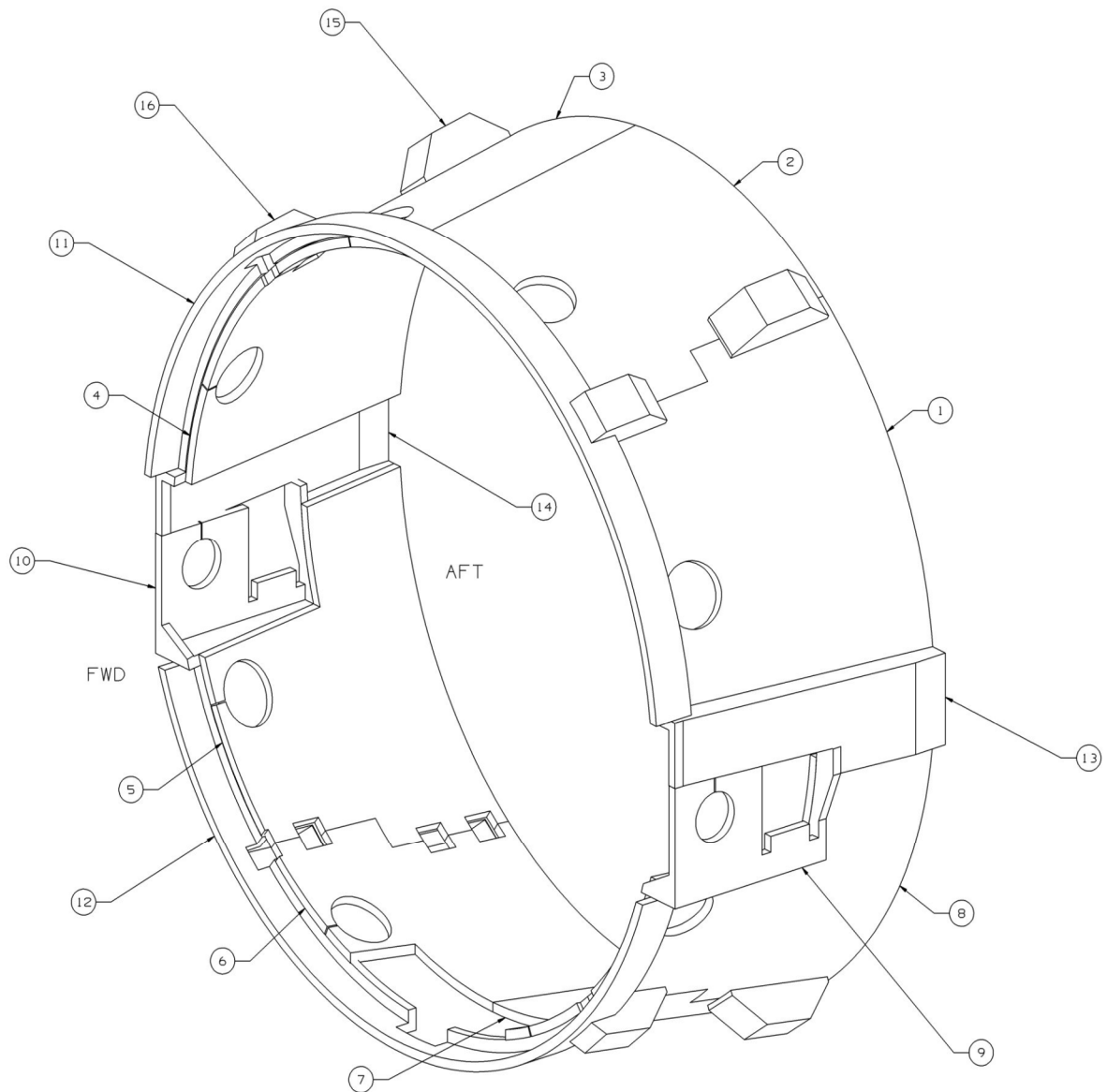
AND VIEW B-B (SH2),
POSITIONED ON EDGES
JACENT BLANKETS.



ISOMETRIC VIEW



Exhaust Frame





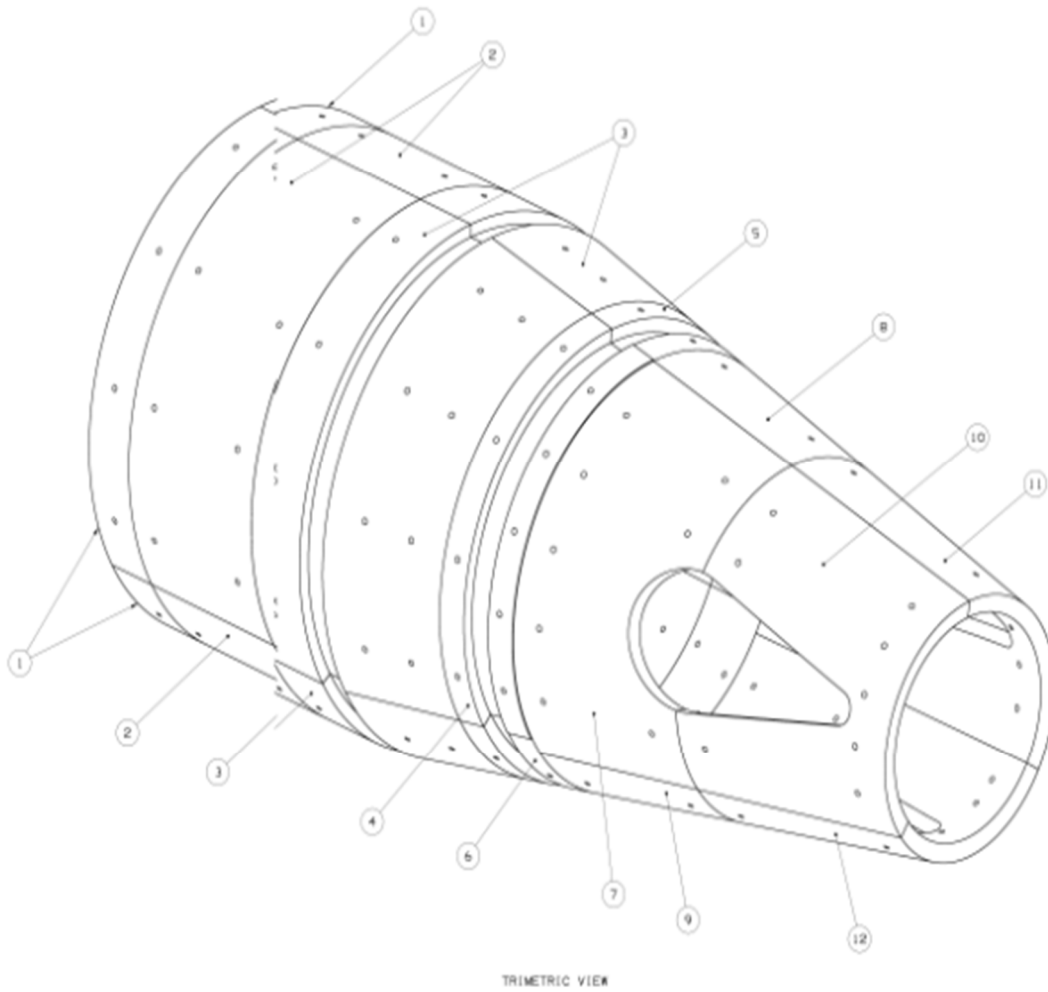
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Internal insulation of aft diffuser





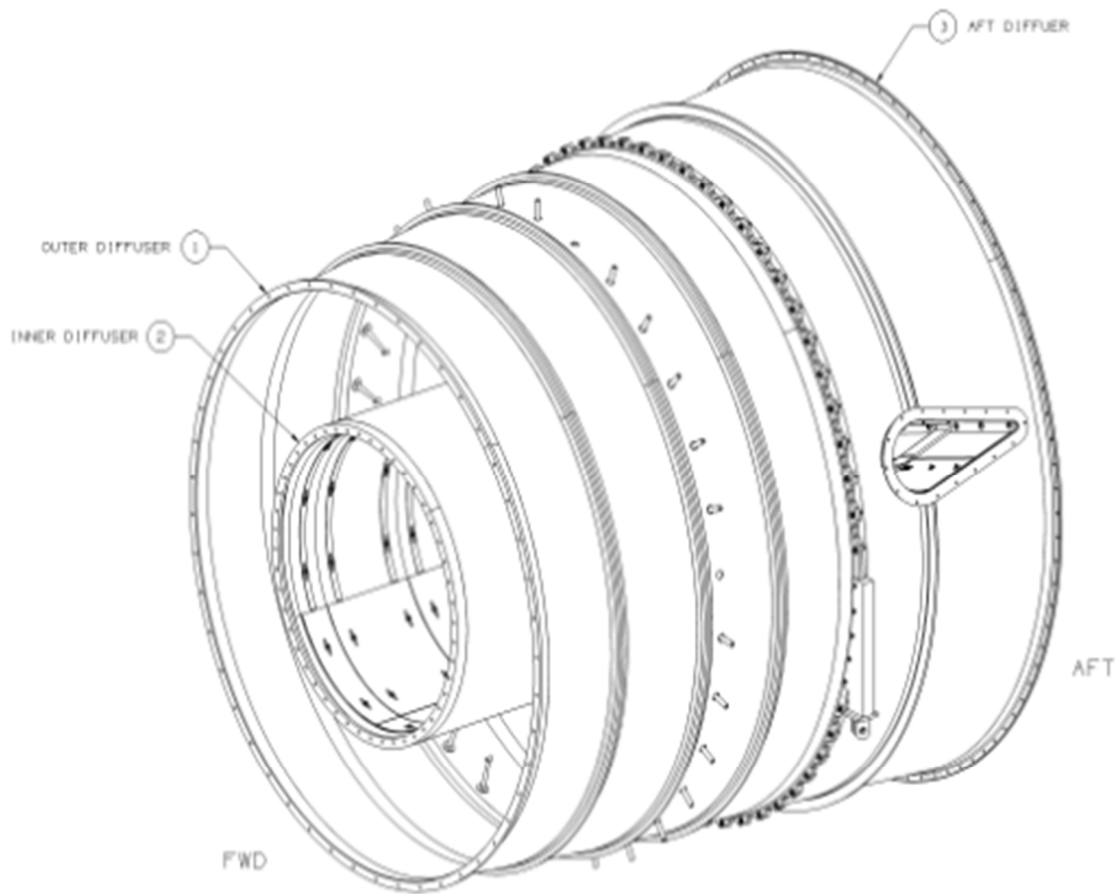
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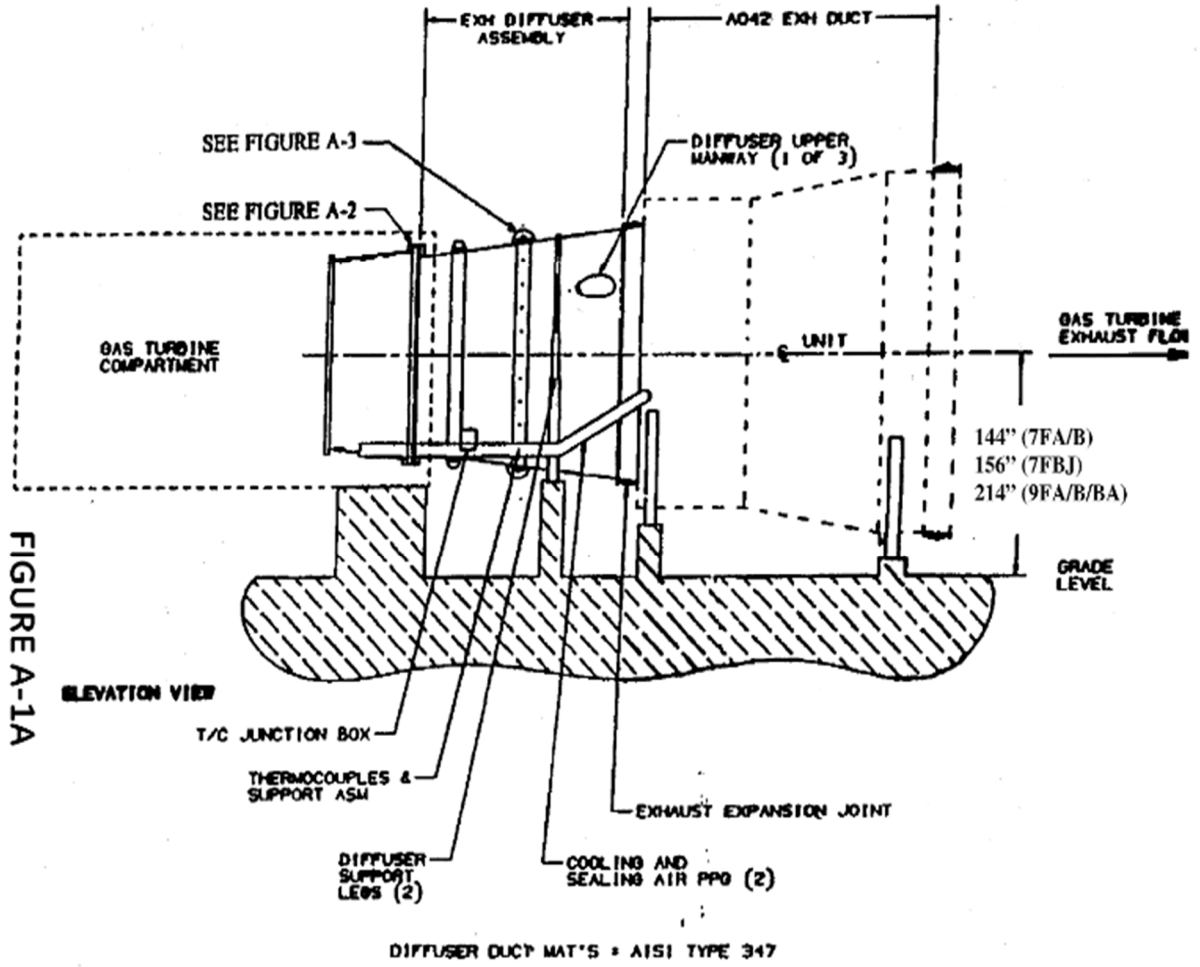
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External insulation of aft diffuser and Expansion joint





EXHAUST SYSTEM EQUIPMENT IDENTIFICATION