

Technical Specifications for supply and commissioning of retort & lid for existing pit-type furnace (Figure 01)

S.No.	Description	Technical specifications	Remarks	
1.	Retort			
a.	Operating Temperature	To be designed for continuation operation at 940 °C	Essential	
b.	Size	Ø 650 mm x 1600 mm Depth with dished end (Ref. Attached drg.no: 001)	Essential	
c.	Material & construction	Retort body	Material: Stainless Steel 310 grade Sheet Thickness: 8 mm Bottom End: Dished with Gas Seating Arrangement for Provided for loading the job	Essential
		Retort upper plate	Material: Stainless Steel 310 grade Thickness: 12 mm shall be TIG welded to the retort	Essential
		Retort collar plate	Material: Carbon Steel Thickness: 12 mm shall be TIG welded to retort plate	Essential
d.	Water cooling jacket & connections	Suitable water-cooling circulation shall be provided at collar plate to protect the sealing rings and necessary inlet & out let port shall be provided	Essential	
e.	Sealing	Double-sealing type silicon sponge-type rubber is to be provided to arrest the leakage through the door.	Essential	
f.	Retort holding Plate	Retort shall be provided with lifting point for maintenance (minimum 3 nos.)	Essential	
2.	Door Lid			
a.	Size	Shall suit the retort	Essential	
b.	Material	The door lid shall be made out of fabricable steel of minimum 16 mm thick plate with locking sections	Essential	
c.	Water cooling system/jacket	Water-cooling system/jacket shall be provided before sealing the door lid to protect the sealing material and motor bearings.	Essential	
d.	Port provision	Lid shall be provided with ports as per below: <ul style="list-style-type: none"> • One port for nitrogen gas inlet to the retort • One port for exhaust of process byproducts in the form of gas with the burning flame port • One port for the thermocouple input • One port is provided extra for future applications 	Essential	
e.	Air circulation & Fan configuration	<ul style="list-style-type: none"> • A shaft with the impeller-type fan shall be provided on the door lid in the center for uniform heat circulation inside the retort • Shaft, impeller and lower body of lid which goes into retort shall be made from stainless steel 310-grade 	Essential	

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f.	Fan motor	1) The motor shall be provided with two roller bearings of reputed make (preferably TMK/NTN/SKF) 2) The motor make shall be ABB/Kirloskar	Essential
g.	Lifting hooks	A minimum of four hooks shall be provided for lifting the lid with the help of a pneumatic system	Essential
h.	Lid mounting guide rod	At least two Ø25 mm guide rods shall be provided for easy and perfect mounting on the retort	Essential
3.	Delivery Period	Within five weeks from the P.O. date	Essential
4.	Standard warranty	Minimum of 12 months from the date of installation and commissioning at CMTI	Essential
5.	The critical dimensions of retort and lid system for pit type furnace and metal sheet thickness requirements are specified in the drawing and other dimensions are as appropriate for the furnace	Attached drawing no:001	Essential

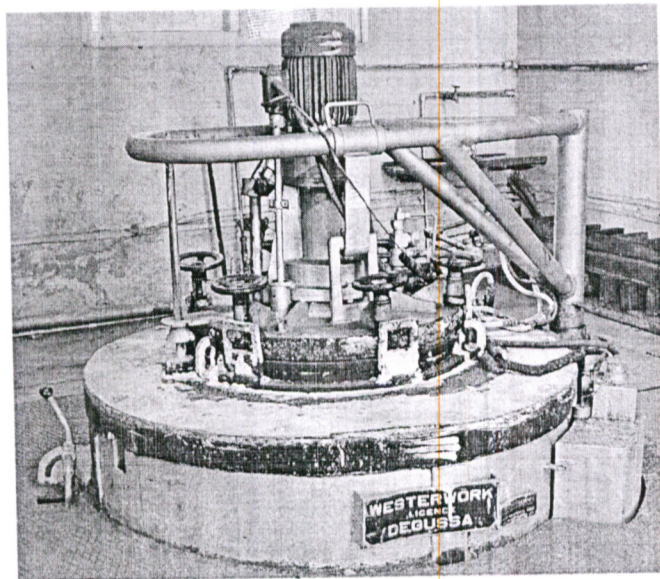


Fig. 01 Pit - type furnace

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DRAWING No:001
SCHEMATIC DRAWING FOR PIT-TYPE FURNACE RETORT WITH LID

