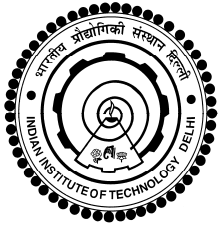


INDIAN INSTITUTE OF TECHNOLOGY, DELHI

HAUZ KHAS, NEW DELHI-110016

Mechanical Engineering Department



P M V Subbarao

DATE: 30th August 2011

Notice Inviting Quotations

Quotations are invited for supply of fin and tube heat exchanger prototypes with following specifications for doctoral research in Turbomachinery Laboratory at IIT Delhi. Sealed quotations should reach by 15th September 2011, 4.00 pm in Mechanical Engineering Department Office (Room No 263, Block II), IIT Delhi.

Specifications:-

- Single tube heat exchanger prototypes
- Quantity – 08

BILL OF MATERIAL (for each prototype)				
S.No.	Item	Material	Quantity	Specification
1	Fins with punched holes and winglets.	Al	24	Thickness 1 mm. See the model drawing no. 1 for details
2	Central fin sandwich with grooves to embed thermocouples.	Al	1	Thickness = 2+1 = 3 mm See the model drawing no. 1
3	Tubes	Cu	1	$\Phi = 38.1$ mm, Length = 32cm, wall thickness = 1.5 mm
4	Plate clamps	Al	2 x 2 = 4	See model drawing No. 1
5	Rivets	Al	24 x 4 = 96	---
6	Tube sockets	M.S.	2	---

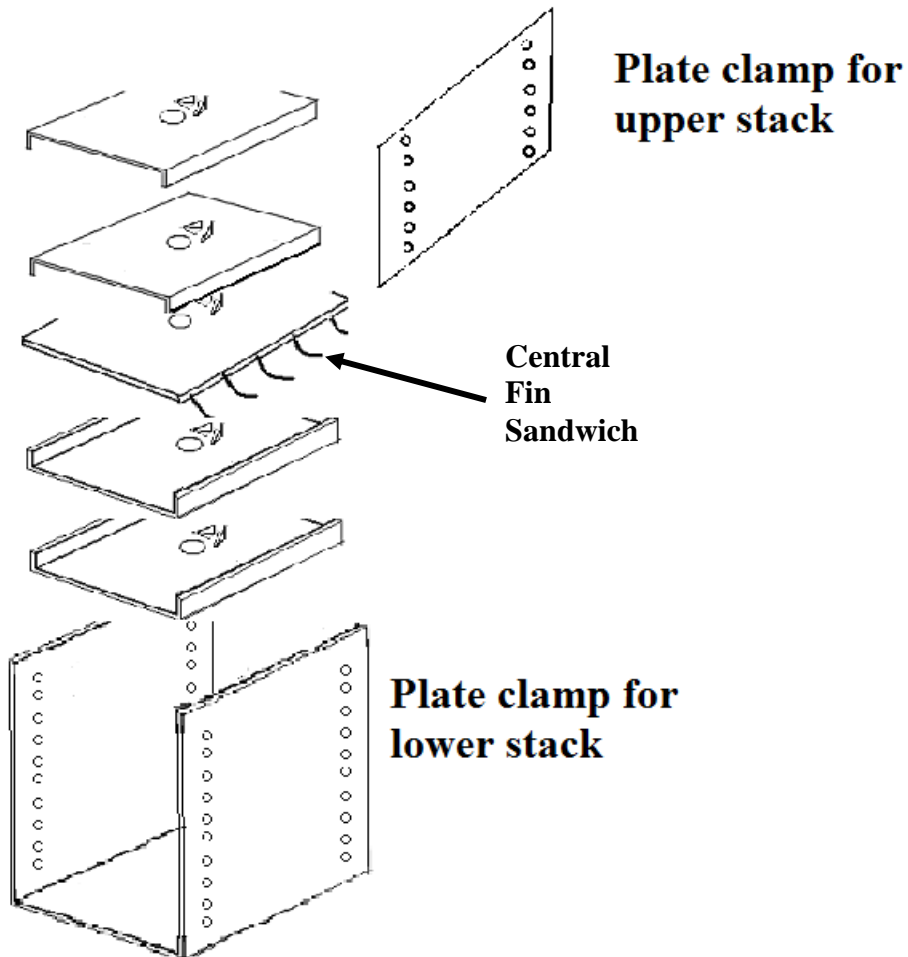
Note – Auxiliary details, which are unique to each prototype, will be supplied during the course of fabrication.

- Separately quote all taxes and CIF IIT Delhi.
- Also submit proprietary certificate if applicable.

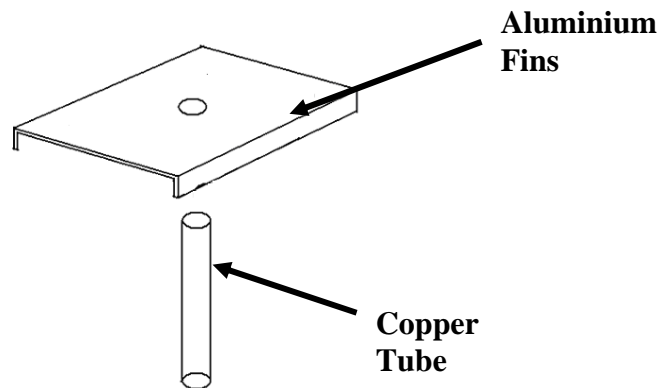
Prof. P M V Subbarao

SINGLE TUBE HEAT EXCHANGER PROTOTYPE

Drawing no. 1



Drawing no. 2



Arrangement of fins -

- Lower stack of 11 fins
- Central sandwich
- Upper stack of 10 fins
-

Upper stack	+	central sandwich	+	lower stack	= 299 mm
12 + (13 x 10)	+	2 mm	+	(13 x 11) + 12	= 299 mm
12 + (130)	+	2 mm	+	(143) + 12	= 299 mm

Net height of stack for free flow of air = 299 mm

Gross height of stack = 299 + 2 (uppermost & lower most fin) + 1 (plate clamp) = 302 mm