

5.0 RESULTS

5.1. STEEL QUANTITY

All individual trusses were compared to its steel quantity against the span of truss. Table 5-1 and figure 5-1 shows the variation of weight Vs Span.

Table 5-1 : Weight of Steel

STEEL QUANTITY COMPARISON			
Span of Roof Structure	Hot Rolled	Cold form	%
	Ton	Ton	Difference
4.0m	0.069	0.03	56.5
8.0m	0.336	0.118	64.8
10.0m	0.45	0.178	60.4
12.0m	0.56	0.45	19.6

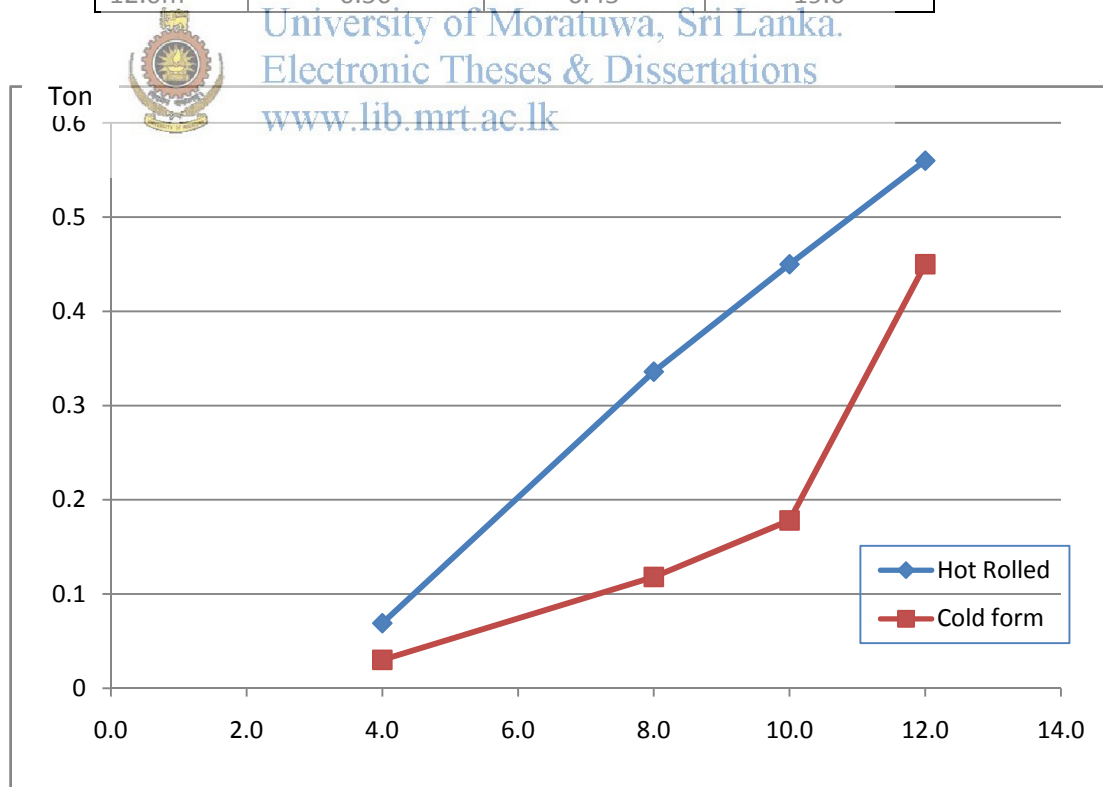


Figure 5-1: Steel Quantity Comparison for Individual Truss

5.2. TOTAL COST OF ROOF STRUCTURE

The total cost for complete roof structures were compared under this section. This included the cost of galvanizing for the HRS section as a precaution for corrosion. Since CFS itself comes as galvanized members, there is no need of additional percussion on this regard. Cost of the purlins and the roofing sheet were also included. Evaluation of the cost of structures are shown in *Annex - F*. Comparison of the total cost of roof structures for two steel families shown in *Table – 5-2*, and *Figure – 5-2*

Table 5-2 : Total Cost of Structure

TOTAL COST (Rs)			
Truss Span	Cold Form	Hot Rolled	Net Saving
4m	482,750.00	559,250.00	76,500.00
8m	1,180,500.00	1,574,250.00	393,750.00
10m	1,294,750.00	1,700,150.00	405,400.00
12m	2,939,250.00	3,160,500.00	221,250.00

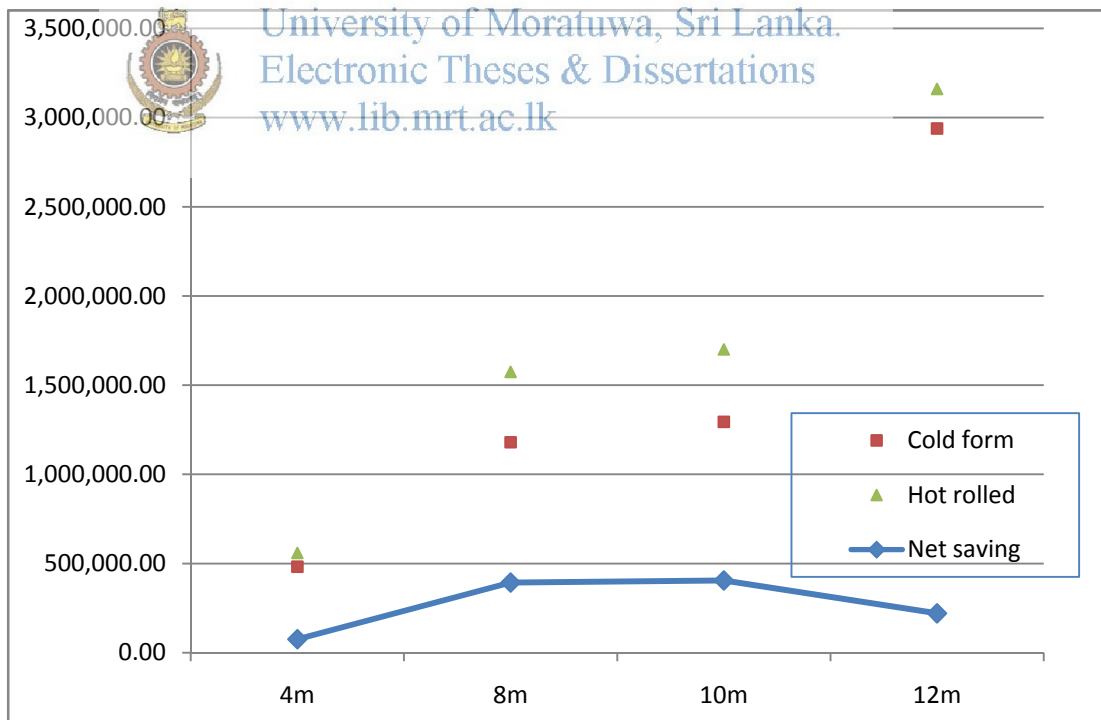


Figure 5-2: Total Cost of Roof Structure - Comparison

5.3. UNIT COST OF ROOF STRUCTURE

Extensive study of cost evaluation for 1m² of roof structure has been carried out under this section and summarized results are tabulated in *Table 5-3*. Graphical interpretation of cost variation for unite area of roof structure is shown in *Figure 5-3*.

Table 5-3 : Unit Cost of Roof Structure

UNIT COST OF ROOF (Rs)				
Truss Span	Roof cover area m ²	Cold Form	Hot Rolled	Net Saving
4m	48	10,057.29	11,651.04	1,593.75
8m	128	9,222.66	12,298.83	3,076.17
10m	128	10,115.23	13,282.42	3,167.19
12m	288	10,205.73	10,973.96	768.23

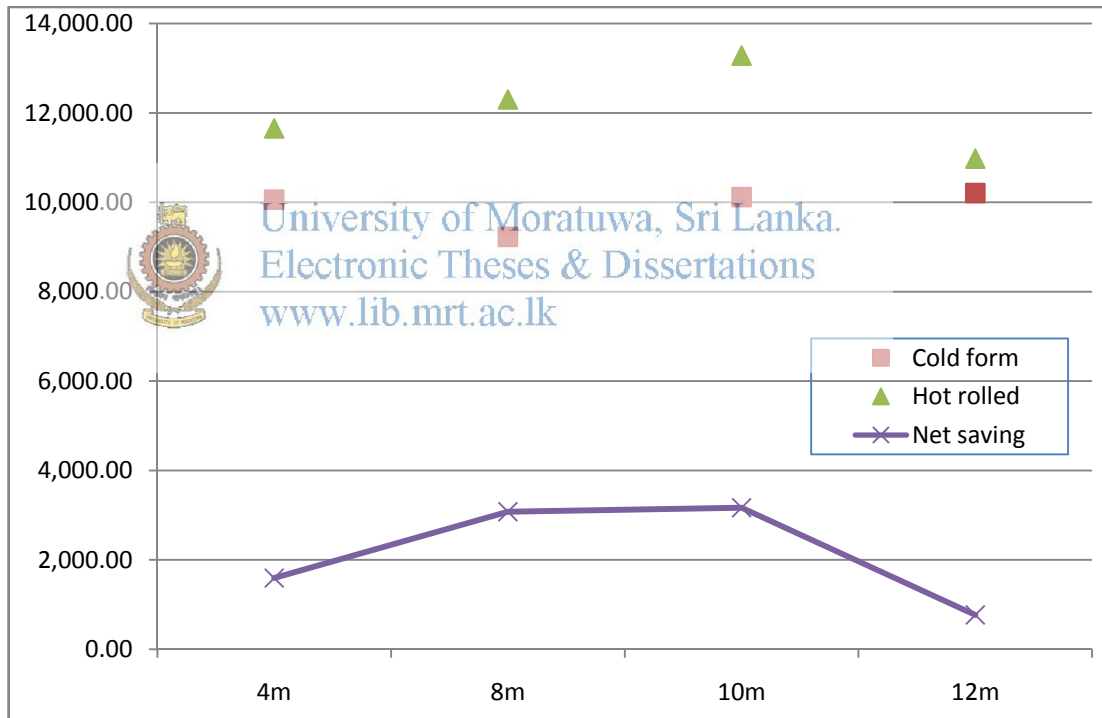


Figure 5-3: Unit Cost of Roof Structure - Comparison