CASE STUDY

ASSY CHASSIS LADDER FRAME, HGV, 4x2x 4M

SUMMARY

Customer

Specialist development of Electric Heavy Goods Vehicle.

Problem Statement	Assessing the optimal supplier for chassis ladder production in Northern Europe to determine the overall cost effect of India production of side rails.

Business Challenges

1. Nominating the European main supplier.
2. Negotiating the supply price.
3. Determine the manufacturing location for the chassis rails – India vs Europe, based on cost quality and delivery.

Scope

1. Evaluating the existing design to ascertain the cost of the chassis ladder frame assembly using the should-cost methodology specific to Northern Europe
2. Estimating the manufacturing costs for chassis rails in India

Key Aspects considered for the should cost

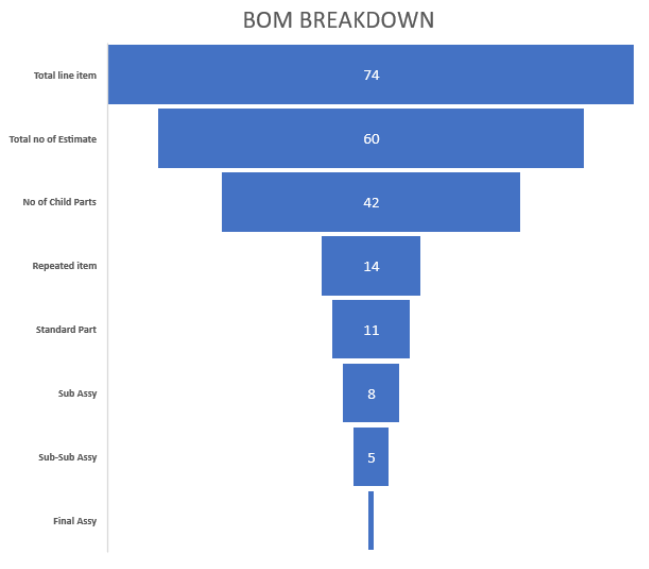
1. Ideal Process Planning with Advanced Technology Integration.
2. Appropriate Machine Selection.
3. Precise Process Parameter Determination.
4. Contemporary cost data for materials, machinery, and labor at the manufacturing site.

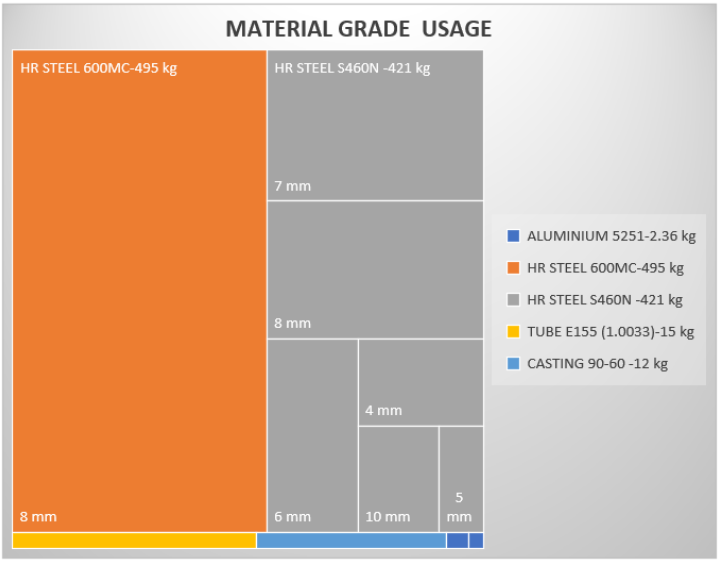
Deliverables

1. Report on Should-cost Analysis for Chassis Ladder and Rails.
2. Identification, Analysis, and Recommendations for Cost Drivers and Reduction Strategies.
3. Documentation of Knowledge and Lessons Learned.

TECHNICAL DATA

Annual quantity	1400
Estimation Location – Chassis Ladder Frame	North Europe
Estimation Location – Rails	North Europe & India
Number of shifts - Assumed	Double
Batch Volume - Assumed	100
Finish Wt. in kgs	591.8





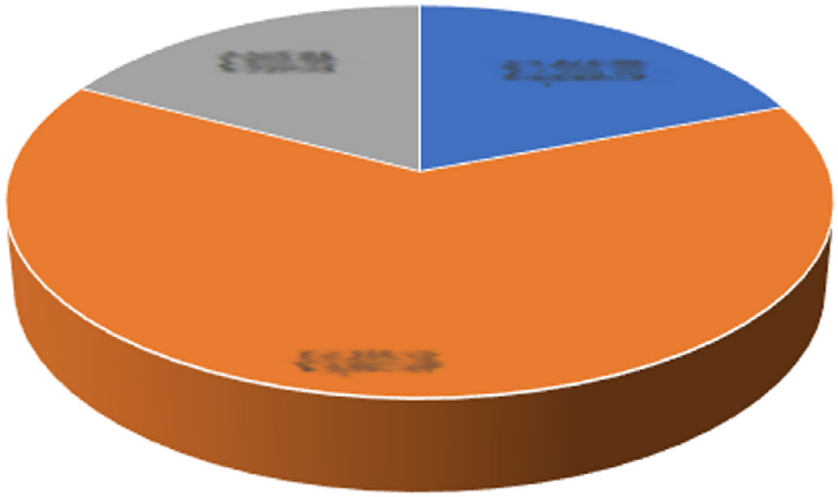
COST BREAKUP FOR CHASSIS LADDER FRAME

Selling, General, and Administrative expenses: 10% considered on manufacturing cost, with a 10% profit considered on the overall cost.

The second-largest cost contributor is material cost of the assembly, with a total input weight considered of 935 kg.

17%

19%



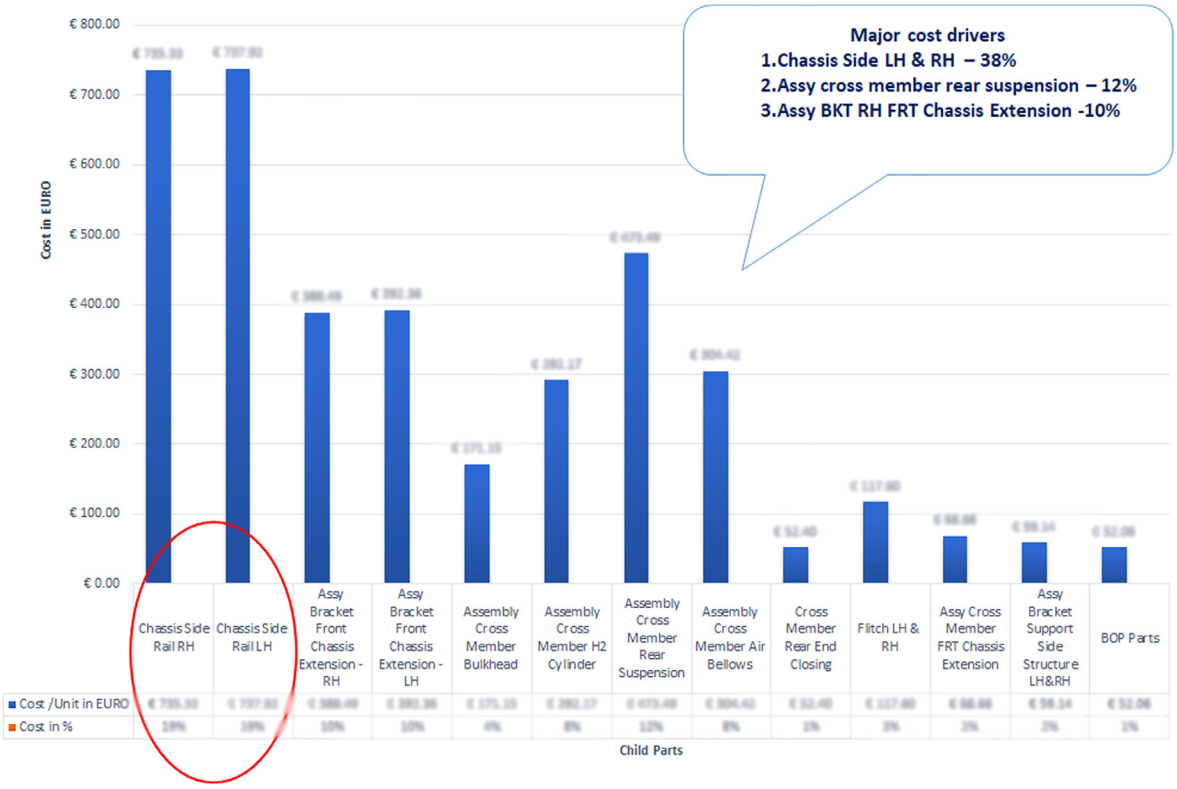
63%

HGV 4x2x 4M ASSY CHASSIS LADDER FRAME, the primary cost driver is the process cost.

Total cost / Assembly – €[redacted]

Manufacturing Location – N. Europe

MAJOR COST DRIVER ANALYSIS



CHASSIS SIDE RAIL REGION – COST COMPARISON

VALUE ADDITION

01

established target prices with suppliers for all components within the chassis ladder assembly.

02

Utilising cost breakdown assists validation and effective negotiation with suppliers, facilitating selection of the optimal option.

03

analysis of major cost drivers guides the client in conducting value engineering analysis for design and cost optimization.

04

directed the client towards a cost-saving opportunity, highlighting a 38% reduction in manufacturing costs for the rails in the India region compared to Northern Europe.