INDUSTRIAL BUSINESS MART
Vol 2, Issue 7, January 2006

Publisher & Editor
Nandita S
Associate Editor
Manpreet Sachdeva
Honorary Editor
A S Shetty
T V R Unni
Director Administration
Mohind G Samuel
Creative Director
Madhu Menon
Director Operations
Hari Shanker
Chief Marketing Officer
Saju Vincent
Circulation
Sandeep S
Creative Assistant
M A A Giri
Production Manager
S M Shanker
Production Team
Aravind M K
Sateesh N V

Corporate Office:
Haritha Publishers Pvt Ltd
No.279, 7th Cross
Chikkabanaswadi
Bangalore - 560 033
Tel: +91-80-25456934
Telefax: +91-80-25426934
Email: info@haritha.org

Marketing Offices:

Bangalore
Ajith Kumar
Cell: 93425 38668
Pranesh
Tel: 080-25426934

Ahmedabad
Nitin Vasani
Tel: 079-27434300

New Delhi
Varun Gupta
98181 96702

Mumbai
A Chatterjee
93228 89357

Kolkota
B Chakraborthy
Tel: 9831125605

Chennai
chennai@haritha.org
Tel: 93805 90542

Hyderabad
Mohd Ismail
98480 50061

Edited, Printed, Published and Owned by Nandita and printed by her at Lotus Printers, No.32/25, 2nd Main Road, Sir MV Industrial Town, WO C Road, Bangalore - 560 044 and Published from No.11, Jessy Nilayam, 21st Cross Lakshmipuram, CMH Road, Ulsoor, Bangalore - 560 008

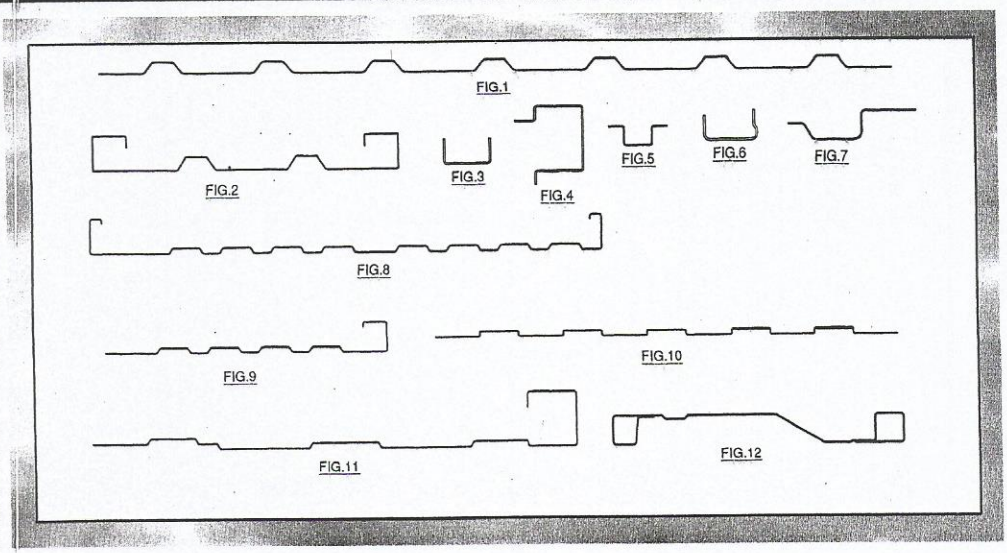
Industrial Business Mart is a monthly journal published from Bangalore. Views and opinions expressed in this journal are not necessarily those of the publishers. Industrial Business Mart reserves the right to use the information published herein in any matter what soever.

While every effort has been made to ensure the accuracy of the information published in this edition, neither the publisher nor any of its employees accept any

ROLLFORMING Sections used in Vehicle Load Bodies

A S Shetty

In this Nineteenth series of articles on Rollforming we will discuss about Rollforming of Sections used in Load Bodies. Since some years it was being increasingly realised in India that the best way to achieve fuel efficiency for Trucks and LCV's is to make use of high-strength-to-weight ratio rollformed sections for their load-bodies.



The initial impetus given to this trend was because of predominently Japanese tie-ups in LCV sectors. Since then more and more load body designs have started emerging in the Indian scene. Even for three wheelers new designs of load bodies are getting introduced these days in the Indian market.

The earlier load carrying capacity for load bodies used to be in the range of 2 tonnes to 25 tonnes capacity. By going for lesser capacity load bodies the ever increasing demand for lower load carrying capacity requirements are also getting efficiently fulfilled.

Apart from regular goods transport there are requirements for mobile workshops, mobile cranes, mobile generators, mobile drilling rigs, water and fuel tankers, mobile refrigerated units, various specifications of fire tenders, dumping and tilting vehicles, garbage and refuse collection vans, recovery vehicles etc.

Especially for truck load bodies they are categorized on the basis of design namely Rigid Axle Vehicles and Tractor Trailor Combination. Trucks are further sub-categorized on the basis of truck body construction like the following: a. HSD- High Side Deck Body. b. Fixed Side Deck or Half Body c. DSD- Drop Side Deck Body d. FB- Flat Bed or Fully open Body. e. CLB-Closed Body f. ALC-Aluminium Container. g. STC- Steel Container. h. Special Purpose Body.

The Load Body is fixed over a sub-frame to distribute the load evenly on chasis frame and also to create gap between body and tyre/chasis for wheel articulation. The Floor, Head Board) also called crash guard or front Wall) and Side Walls are the main load bearing elements of the Load Body.

The Floor shall be rigidly supported on the Sub-Frame. The Section of Floor and Floor supports in the sub-frame shall be pitched/spaced to achieve distributed loads even in case of concentrated loads such as steel coils or heavy machinery etc. The side walls and crash guard shall be designed to bear part of load carried on the vehicle in case of braking, turning on slopes etc.

It has been proved by Finite Element Analysis that Side walls carry 50% of the Load carried., Crash Guard or Head Board 100% of Load Carried and Rear Wall or Tail Gate 50% of the Load Carried.

Fig. 1 to Fig 12 are a few examples of the Rollformed Load Body Sections being used. There are many types of Load Body Sections in use and also still many more are going to be developed in the years to come all over the world . The aim is to build stronger Load Bodies with reduced weight, greater durability, increased operational safety, resistance to impact and with provision for effective cushioning effect. Sedvik Industries, Bangalore is involved in developing several rollformed load-body sections.

The latest trend in the vehicle body design is the usage of of steels: Dual-Phase(DP) Steel, Transformation-Induced-Plasticity(TRIP) steel, Complex-Phase(CP) Steel and Martensitic(Mart) Steel.. They have high work hardening rates plus excellent elongation properties.

They have high structural rigidity and good energy-absorption capability and crush resistence. Another new trend is the development of tailored tubes which allows the fabrication of complex shapes with reduced pass count and tooling cost. Here the shaped elements are formed from seperate strips and precision laser welded to fabricate composite sections.

The author Mr. A S Shetty is the honorable editor of this journal, and the chief executive of Sedvik Industries. For your queries you can contact him at 080-25452669 or emial him at sedvik@vsnl.com For the last fourteen issues subscribe today to Industrial Business Mart @ 350/- for 2 Years, send mails to info@haritha.org