

Profile

INAUGURATION

Integral Coach Factory, Chennai, is a premier Production Unit of Indian Railways manufacturing railway passenger coaches.

ICF is the first of its kind to be established after Independence for the manufacture of light weight, all steel and all welded "Integral" railway passenger coaches. The factory was set up in 1955 with Swiss collaboration.

PRODUCTION

ICF's initial plan was to produce 350 Broad Gauge Third Class shells (unfurnished body of the Railway Coaches) only, which were to be furnished by the Zonal Railways' workshops. Later, in view of the severe limitation of capacity of the Railway workshops and also to take advantage of mass production, a separate Furnishing Division was added on 2nd October, 1962. The capacity was progressively expanded from the initial 350 shells to 750 fully furnished coaches per annum by 1973-74 with additional inputs. This was enhanced progressively from 850 coaches during 1986-87 to 1000 coaches in 1990-91. The modernization project is under last stage of execution to augment capacity to 1250 coaches and will be over by 2010-11.

Capacity is further being enhanced to 1500 coaches per annum through infrastructure additions and modernization of machines.

DESIGN FEATURES

The design concept of the coach stipulates that the roof, side wall, end wall and the underframe are joined together by welding, to form a fully 'integral' coach shell. The end-wall construction has been made specially strong to make it anti-telescopic to ensure maximum safety to passengers. Further, crashworthy features are provided with CBC design to minimize impact on passengers during accidents/derailments.

From the basic design handed down by the collaborators, ICF has diversified having established its expertise and skill in this field, to design and manufacture more than 350 different types of coaches for Indian Railways and export market. Every time a new type of coach is launched, emphasis is laid on improving passenger comfort, passenger safety and higher speeds. ICF follows standard inspection procedures to ensure quality from raw material stage to the finished coach.

PRODUCT RANGE

ICF has been meeting the needs of the Indian Railways for varied types of coaches, however sophisticated the type may be. Some of the important types are:

1. SELF PROPELLED COACHES

- Electric Multiple Units for suburban services in Metropolitan cities;
- Diesel Rail Cars;
- Metro Coaches for Kolkata Metro Railways;
- Diesel Electric Multiple Units & Diesel Hydraulic Multiple Units for non-electrified routes and Mainline Electric Multiple Units for long distance inter-city commutership.
- Accident Relief Trains / Medical Vans
- OHE Inspection Cars

2. AIR-CONDITIONED & NON-AIRCONDITIONED PASSENGER COACHES

- Air-conditioned Sleeper Coaches of first & second class;
- Air-conditioned Chair Cars of first and second class;
- Double Decker Coaches with seating capacity for 148 passengers as against the conventional 90 passengers.

3. SPECIAL COACHES

- Air-conditioned & Non-air-conditioned Pantry Cars
- High Capacity Power Cars for Shatabdi & Rajdhani Express Trains
- Air-conditioned Military Ward and Saloon Cars for Indian Army.
- Air-conditioned Saloon Cars, Dining Cars, Bar & Restaurant Cars, luxury suites for luxury tourist trains like Palace on Wheels (WR), Deccan Odyssey (CR), The Golden Chariot (SWR), Royal Rajasthan on Wheels (NWR) and Maharajas' Express of IRCTC
- Lifeline Express for operation of hospital on wheels
- Jet Deflector Crane Cars, Inter Communication Coaches for DRDO

EXPORT

ICF's achievement on the export front has been enviable since its inception. Against stiff international competition from more advanced countries like Japan, etc., ICF secured several export orders, most of which are repeat orders. So far, 359 bogies, 11 stainless steel coach shells and 481 coaches including air-conditioned coaches have been exported to 13 Afro-Asian countries. ICF has bagged a number of awards for Export Excellence also.

DESIGN & DEVELOPMENT EFFORTS

Complementing the existing design capacities and facilities, a fully computerised Design & Development Cell has been set up with sophisticated state-of-the-art computer designing facilities and testing equipment both for coach components and raw materials. D&D Centre uses 3-D modelling on SolidWorks platform for generating 3-D drawings and IDEAS software for Finite Element Analysis.

Strain gauge testing and squeeze test are done on prototypes before commencement of series production.

PRODUCTION WITH INNOVATION

ICF has carved a niche in the Indian Railway system by constantly improving the 'quality of travel' through its passenger coach design which has undergone a sea-change from the days of bye-gone era of mere 'transport of passengers'. There has been a steady growth both in the quality and quantity of its production. Over the years ICF has endeavoured to meet passengers' expectations through innovations like

- Cushioned seats in General Second Class and SLR coaches
- Provision of Controlled Discharge Toilet Systems
- Anti-injury features in the passenger areas of A/C 2-tier and Sleeper coaches
- Enhanced carrying capacity in A/C 2-tier, First A/C and Garib Rath Chair Car
- Provision of forced ventilation, PIS/PAS in AC/DC EMUs for WR and CR
- UIC vestibules in mainline coaches
- Disabled friendly features in SLRD/SRD coaches
- Modular toilets in passenger coaches
- Stainless steel panelling, handholds in EMUs
- Provision of laptop and cell phone charging points in passenger coaches
- Use of stainless steel in Pantry Cars including interiors and the equipment

As milestones in this endless travel, ICF has obtained the ISO: 9001, ISO: 14001 and ISO: 18001 certificates for the QMS, EMS and OHSAS systems respectively.

All this has been made possible through ICF's commitment to progress and improvement with its dedicated workforce functioning in a contented atmosphere in pleasant surroundings and working conditions. Several welfare schemes like staff quarters, adequate clean water supply, improved medical facilities, online information kiosks, issue of pass centrally, encouragement in sports activities, etc., are provided.

PRODUCTION WITH INNOVATION is our motto and we will continue to live up to it.