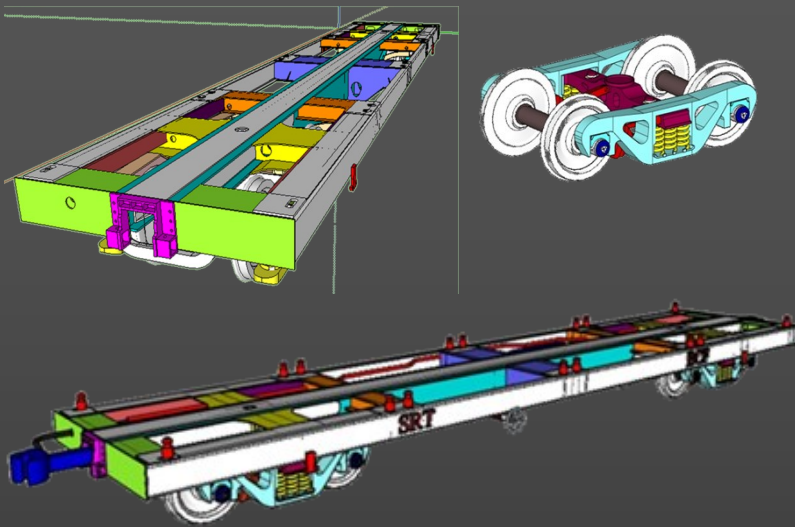


## • BOGIE CONTAINER FLAT WAGON (BCF)

**Bogie Container Flat Wagon (BCF.)** designed, fabricated and assembled by WEST COAST ENGINEERING (WCE). Within our engineering capabilities, experience in related heavy industrial field and collaboration with technology provider and institutions, our product would be the 1st in Thailand that be designed, fabricated and assembly fully following international rail industry standard and comply with State Railway of Thailand (SRT) 's re-



### Typical Technical Specification

Coupler height from top of rail (tare state).....	850 mm.
Maximum permissible axle load on rail .....	20 m. ton
Wagon tare weight, not more than .....	18 m. ton
Length over wagon headstocks, not more than .....	12,500 mm.
Diameter of wheel on tread (new/worn).....	851/767 mm.
Maximum operating speed.....	100 km/h.

## • MAINTENANCE AND MACHINERY SERVICES

### 1) Wheel Shaft Repairing

Wheel maintenance is very high important in rolling stock maintenance activities. It is directly impact to the RAMS. WCE can provide the wheel shaft repairing service with the quality comply with SRT's requirement [Surface roughness < 0.4 micron, Hardness > 250 HB and dimension tolerance 0-0.0267%].

### Product Features and Standard

#### 1) Underframe

High performance wagon body fabricated by WCE in-house according to international fabrication process, modern CNC plasma cutting machine, submerge arc welding machine and skilled welder. The underframe is able to sustain the minimum longitudinal tensile or compressive force of 180 metric ton.

#### 2) Bogie

4-wheeled type based on AAR standard with 1,750mm. Nominal wheelbase. 2 technologies of bogie for 1,000mm. track gauge are available; 3-Piece bogie and Self Steering bogie. E-Class Bearing type is applied for the wheel set.

#### 3) Brake System

Conventional UIC specified single pipe gradual release automatic air brake incorporated with slack adjuster and automatic load brake device. Design for maximum operating speed of 100km/h. and capable to stop fully loaded wagon within 750 meters.



#### Contact:

Kajorn Sivarungson  
✉ kajorns@wce.co.th  
☎ +66 89-969 8895  
Anantana Prommoon  
✉ anantanap@wce.co.th  
☎ +66 63-237 8012  
www.wce.co.th

Head Office: 16 K&Y Building, 5th Fl., Surasak Rd.,  
Silom, Bangrak, Bangkok 10500 Thailand

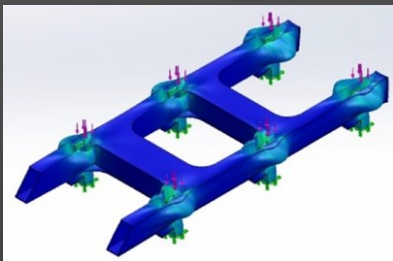
Factory: 9/1 Moo 4, Ban Klangna—Yaiploy Rd.,  
T.Maerumphueng, Bangsaphan,  
Prachuapkhirikhan 77140 Thailand

## 2) Recondition & Reverse Engineering

WCE access to original manufacturer drawings and engineering data. This enables us to precisely design the recondition process. If any lost of engineering information, it can usually be recovered with reverse engineering process. This is very useful for the customer in order to minimize the maintenance cost.

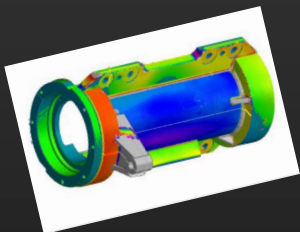
### 2.1) Bogie Frame

WCE have experience with the reconditioning of Alstom locomotive bogie frame. In addition, we did the reverse engineering to enhance its mechanical property by applying a higher material class



### 2.2) Suspension Tube

Suspension tube is an important part for the locomotive. Its function to suspend the traction motor with the axle and bogie frame. WCE have experience with the reconditioning of GEA locomotive suspension tube. In addition, we did the reverse engineering to produce the nose of



## • RAIL BRIDGE

### Customized dimensions meeting various design needs

We fabricate customized dimensions comply with customer's requirement and design. We can provide the engineering, fabrication, erection & installation and installation supervision.

### Cost Lower

Minimizing the fabrication yield and the source of raw material are the key to minimize the cost. We can do the detail fabrication engineering as long as shop drawing and cutting plan. The collaboration and networking within the group company empowers WCE to procure raw



material with the

Year	Location of the Bridge	Quantity and Size	Customer
2013	Ayutthaya km.84.885	10 off TP Type 12m.	CBD Development
		4 off DP Type 6.15m.	CBD Development
2015	Sakaeo km.219+003 Sakaeo km.252+290	1 off TT Type 30m.	SRT
		1 off TT Type 35m.	SRT
2019	Prachuap khiri khan km.348+701 Prachuap khiri khan km.321+315 Prachuap khiri khan km.356+850 Prachuap khiri khan km.377+104	4 off TT Type 40m.	KS-C Joint Venture
		2 off TT Type 50m.	KS-C Joint Venture
		1 off TT Type 60m.	KS-C Joint Venture
		1 off TT Type 70m.	KS-C Joint Venture

## • PART SUPPLY

Within the collaboration between WCE and strategic partners whom are the world-class technological provider in the rail transport industry, there are various parts of the rail transport



coupler



wheelsets



Bogie



Axle

### Contact:

Kajorn Sivarungson  
✉ kajorns@wce.co.th  
☎ +66 89-969 8895  
Anantana Prommoon  
✉ anantanap@wce.co.th  
☎ +66 63-237 8012  
www.wce.co.th

Head Office: 16 K&Y Building, 5th Fl., Surasak Rd., Silom, Bangrak, Bangkok 10500 Thailand

Factory: 9/1 Moo 4, Ban Klangna—Yaiploy Rd., T.Maerumphueng, Bangsaphan, Prachuaphirikhan 77140 Thailand