

# SOUTH KOREA: HOU YEOSU PROJECT ERECTION OF 4 VESSELS

PROJECT	EQUIPMENT	WEIGHT
PETROC	STRAND JACK AND TOWER LIFT SYSTEM MEGA GANTRY TRAVELLING SYSTEM	UP TO 869 TON

Chunjo- Fagioli , a Korean joint venture between Chunjo corporation and Fagioli, performed really innovative heavy lifting operations at the petrochemical plant in Yeosu, South Korea: No.4 Vessels up to 870 ton were lifted, skidded and installed inside their plinths by means of a new concept "travelling mega gantry system" 94.4m high and 40m span. This new application of Fagioli Modular Towerlift system worked like a kind of temporary Gantry Crane mounted onto skid tracks equipped with push/pull system allowing both longitudinal and traverse movements in order to install many items in sequence even though they had to be fitted at different heights. Fagioli performed several tests in order to check the stability of the towers onto the skid tracks during the horizontal movement. Fagioli equipment was composed of Tower, Lifting and Skidding Systems: during lifting of the first vessel, carried out by No.2 L600 strand jacks mounted on top of the towerlift system, base frames on which each tower was seated on were secured to tower foundation with anchor bolts.



DESCRIPTION	UNIT	VESSELS			
		652-C-102 REGENERATOR	652-C-101 REACTOR	652-C-203 MAIN COLUMN	653-C-203 C3 SPLITTER
Erection weight (no contingency)	T	869	442	518	542
Erection height	mm	38,100	34,350	62,240	84,020
Diameter (trunnion to trunnion)	mm	11,674	7,864	7,510	5,864
Lifting attachments		Trunnions + 1 x tail lug	Trunnions + 2 x tail lugs	Trunnions + 2 x tail lugs	Trunnions + 2 x tail lugs

No. 16 Hillman roller skate (No. 4 for each skidding trolley) travelled onto rail tracks embedded into crosshead beams allowing the vessel to be transversely moved and then lowered for the installation. Pull movement of skidding system was supplied by No.4 L50 strand jacks located on each end of both crosshead beams. Base frames themselves were mounted onto 97 meters long skid tracks; in order to reach the second vessel position, anchor bolts were released and towers were skidded on tracks using No.8 push-pull jacks 80 tons cap. attached to lugs located at each end of frame beams. To ensure system stability during skidding, further struts arrangement were assembled to tower tops. Once in position, towers base frames were once again fixed with anchor bolts and the whole System was ready for the second lifting. The same procedures were performed also for the third item installation.

