ITALY: EXTENSION OF A REFINERY (SAN NAZZARO DE' BURGONDI)

PROJECT	EQUIPMENT	WEIGHT
PETROC	SPMTs / TOWER LIFT AND STRAND JACKING SYSTEM / CRAWLER CRANES / SKID SHOES	Up to 2000 ton

Fagioli was commissioned to perform the heavy transport, lifting and positioning activities for the extension of a huge refinery in San Nazzaro de Burgondi (in the North of Italy). In this project were involved many different installation operations managed and carried out by Fagioli through its high-tech equipment. For the execution of the whole project Fagioli used a huge deployment of specialized resources, skills and equipment in order to carry out the transport and lifting operations. The main ones were:

- n.1 LR1750 crawler crane (750 tonnes capacity);
- n.1 MG 198 crane (200 tonnes capacity);
- n.112 Spmt's axles lines;
- A Tower lift system composed by no. 28 tower sections for a total tower lenght of 85 m;
- A Stand jacking system composed by no.8 stand jacks each with 600 tonnes capacity and no. 8 strand jack each with 150 tonnes capacity;
- A tailor made tailing structure;
- no. 8 skid shoes with 44 track beams for a total length of 28 m;
- no. 5 Power Pack Units;
-Several other cranes and all the secondary equipment such as forklifts, transport beams, remote control system, fixed etc... The main operations carried out by Fagioli concerned first of all the lifting, assembling and transporting of a 2400 tonnes furnace and secondly the transport, lifting and final positioning of two 1916 tonnes slurry reactors and of seven other modules from 90 to 400 tonnes such as Preflash Column, HDA / HDS Reactors and HHP / HLP Separators.

Concerning the transport, lifting and final positioning of the two 1916 tonnes reactors, 56 m high with a diameter of 5,4 m, Fagioli designed a tailor made structure used to perform the tailing operation during the hoisting phase. The structure was composed by: no. 1 tailing frame; no. 1 jack support beam assembly; no. 2 strand jacks L600 and computer system; no. 4 Skid Shoes to allow the translation of the tailing frame. Together with these, in order to carry out the reactors installation Fagioli used an unguyed towerlift system, 80 meters high, with no. 4 strand jacks L600 mounted on top of it. The reactors were pushed in an horizontal way by the tailing structure skidding on the tracks and lifted at the same time in vertical position by the strands. Once the items were completely held by theTowerlift, they were lowered onto foundations.

The other most impressive operation executed by Fagioli in this site concerned a 55 m high furnace 30x30 m wide, composed by three sections weighing 840, 820 and 740 t for an amounting weight of 2400 tonnes. The main phases were the following: while the third section was lifted by n. 4 lifting towers each one equipped with n. 2 L600 stand jacks on top, the second one was skidded by 112 SPMT's axle lines arranged over four rows under the suspended one. Once the two sections were assembled together, the same procedure was corried out positioning and assembling the first section under the two already assembled. Finally the whole structure was moved, even by112 SPMT's axle lines and positioned onto pre-prepared foundations.