



CASE STUDY _ TEXTILE

RELIANCE INDUSTRIES LTD



Company Introduction

Reliance Industries Limited is a Fortune Global 500 company and is the largest private sector company in India.

The Project had driven according to Reliance's new manufacturing facilities in west India (Hazira) in purpose of manufacturing raw materials, oil, gas, and petrochemicals, etc. AS/RS for the polyester and textile was also the part of the facility project and it took 5,922 (700 acres) of the building area to polyester manufacturing; therefore it was leant the process for increasing capacity to 200 tons a year (an increase of 550,000 tons). SMC designed AS/RS according to Reliance's needs, and provided efficient and accurate Automated System.

PROJECT PROBLEM & SOLUTION

PROBLEM

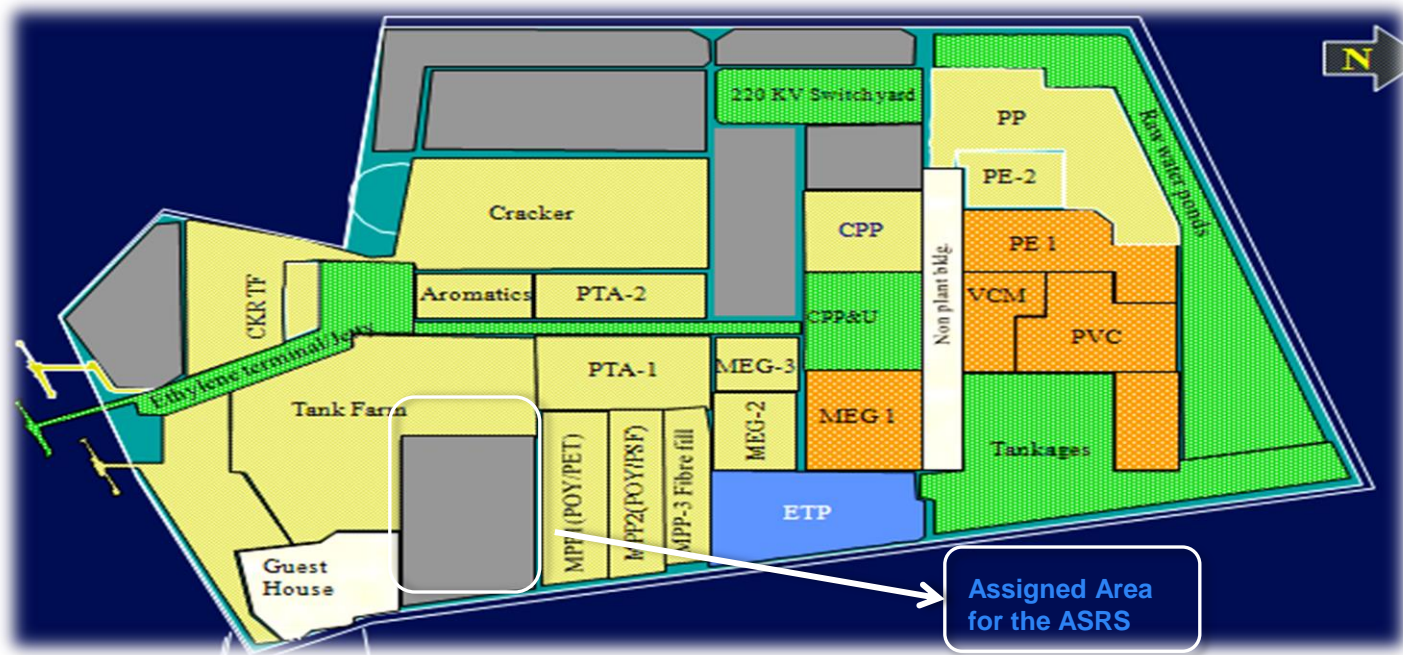
The number of storing items as many as possible in the limited space is the most serious concern for the owners and distributors. The solution must include enough spaces and equipped machines to keep stable throughput to deliver out in convenience.

Reliance also was in need of higher space efficiency due to its limited space against the increasing items to store

SOLUTION

The cost of a building is based on square footage. Building higher and making use of vertical space with High-Bay Racking. Especially, **RSB (Rack Supported Building) type gives more floor and vertical space without increasing square footage.** RSB even make a less total building cost. Because, rack is not only a storage shelving, also can be a basic steel structure of the building.

PROJECT OVERVIEW



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Company	Reliance Industries Ltd
Location	Hazira, India
Load	Products of Textile
ASRS Storage Capacity	30,400 cells
Rack	Rack supported building W 12.8 x L 10.5 x H 6.5 (M)
Stacker Crane	10 Vehicles
Automated Materials Handling Equipment	2 RGVs, 406 Conveyors, 2 Lifts

EQUIPMENT SPECIFICATION



Stacker Crane

- Traveling speed: Max. 180 m/min
- Forking speed: Max. 50 m/min
- Load Weight: Max. 875 kg/pallet x 2 pallet
- Euro Twin Fork Type



RGV (Rail Guided Vehicle)

- RGV Traveling Speed: 120 m/min
- Loading Speed: 12 m/min
- Load Capacity: 875 kg/pallet x 2 sets
- Independent operation by individual controller on each vehicle



Conveyor

- Traveling Speed: 12 m/min
- Load Capacity: 875 kg/pallet
- Load size: 1,280W x 1,050L x 650H (mm)