



CASE STUDY_ PETROCHEMICAL

RELIANCE INDUSTRY LTD



India's Largest Business Enterprise

Company Introduction

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

As a leading company in India, in many site its factory is manufacturing various products. Petrochemical product is main products but other sectors, distributing retail shop or digital service, are also contributed by Reliance. Reliance aims the growth of India industries by extending its influence over all areas.

PROJECT PROBLEM & SOLUTION

PROBLEM

Reliance has a huge production capacity. In order to cover large volume of manufactured product, it is required enough storage in a limited space. Also the product is heavy to handle, so stable and continuous delivery method is also necessary. Beside this two main requirement, precise management for stock is main factor to increase the operation efficiency of the plant

SOLUTION

SMC's transferring system such as conveyor and RGV helps to delivery many products from 24hr operated production line without delay. Additionally, for keeping large volume of product at once, high rack is applied. For maximize required throughput, two pallets are handled at once from RGV and Stacker crane. SMC's Synchronized but independent operation is main factor to handling multi pallets

PROJECT OVERVIEW

Company	Reliance Industries Limited
Location	Dahej, India
Load	Products of Petrochemical
ASRS Storage Capacity	14,400 cells
Rack	Rack supported building W 29.8 x L 103.35 x H 35.85 (M)
Stacker Crane	6 Vehicles
Automated Materials Handling Equipment	2 RGVs, 2 Lifts, Conveyors

EQUIPMENT SPECIFICATION



Stacker Crane

- Traveling speed: Max. 180 m/min
- Forking speed: Max. 50 m/min
- Load Weight: Max. 1,280 kg/pallet x 2 sets
- Euro Twin Fork Type



RGV (Rail Guided Vehicle)

- Traveling Speed: 180 m/min
- Loading Speed: 30 m/min
- Load Capacity: 1,280 kg/pallet x 2 sets
- Independent operation by individual controller on each vehicle



Conveyor

- Traveling Speed: 30m/min
- Load Capacity: 1,280 kg/pallet
- Load size: 1,350W x 1,350L x 1,445H

PROJECT OVERVIEW

Company	Reliance Industries Limited
Location	Silvassa, India
Load	Products of Poly
ASRS Storage Capacity	27,048 cells
Rack	Rack supported building W 37.8 x L 146.05 x H 35.55 (M)
Stacker Crane	7 Vehicles
Automated Materials Handling Equipment	2 RGVs, 3 Lifts, Conveyors



EQUIPMENT SPECIFICATION



Stacker Crane

- Traveling speed: Max. 240 m/min
- Forking speed: Max. 60 m/min
- Load Weight: Max.706 kg/pallet
- Single Deep/ Single Fork Type



RGV (Rail Guided Vehicle)

- RGV1 Traveling Speed: 240 m/min
- RGV2 Traveling Speed: 120 m/min
- Loading Speed: 30 m/min
- Independent operation by individual controller on each vehicle



Conveyor

- Traveling Speed: 30m/min
- Load Capacity: 706 kg/pallet
- Load size: 1,250W x 1,500L x 1,360H

PROJECT OVERVIEW

Company Reliance Industries Limited

Location Hazira, India

Load Products of Petrochemical

ASRS Storage Capacity 11,000cells

Rack Rack supported building

W 33.8 x L 72.3 x H 37.9 (M)

Stacker Crane 6 Vehicles

Automated Materials Handling Equipment 5 RGVs, Conveyors



EQUIPMENT SPECIFICATION



Stacker Crane

- Traveling speed: Max. 180 m/min
- Forking speed: Max. 50 m/min
- Load Weight: Max.1,400kg/pallet
- Single Deep/ Single Fork Type



RGV (Rail Guided Vehicle)

- RGV Traveling Speed: 270 m/min
- Loading Speed: 35 m/min
- Load Capacity: 1,400 kg/pallet
- Independent operation by individual controller on each vehicle



Conveyor

- Traveling Speed: 35 m/min
- Load Capacity: 1,400kg/pallet
- Load size: 1,500W x 1,150L x 1,375H