Reliance's Jamnagar complex represents the largest industrial project ever implemented in the Indian corporate sector.

The Jamnagar manufacturing complex is a fully integrated manufacturing complex, with a petroleum refinery complex, an aromatics/petrochemical complex, a power generation complex, a port and terminal complex, as well as access to a pipeline network.

This high degree of integration at the Jamnagar complex allows for feedstock and product linkages that will lead to higher efficiencies and enhanced value addition.

- Location
- Total area
- Total investment
- Making of Jamnagar complex
- A vast complex
- Refinery-cum-petrochemicals complex
- Refining Processes
- Process technologies
- Special Features of the refinery complex
- World Scale Plants
- Township

**Location**

Situated on the north-west coast of India, the integrated refinery-cum-petrochemicals complex of Reliance is located in the state of Gujarat at village Motikhavdi, Taluka - Lalpur, District - Jamnagar.

The complex being about 815 kilometers by road away from Mumbai and approximately 25 kilometers from the city of Jamnagar is located in proximity to the Gulf of Kutch, a sheltered bay close to the Middle-East crude oil sources.

**Total area**

The entire Jamnagar complex consisting of manufacturing and allied facilities such as utilities and offsets, port facilities and a township for the
employees sprawls over more than 7,500 acres.

If the complex were to be located in Mumbai or London, its area would have covered more than half of these metropolises.

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**Total investment**

The entire Jamnagar complex entailed a total investment of about **Rs.25,000 crores** (or about **US$ 6 billions**).

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**Making of Jamnagar complex**

Created in a record time of **less than three years**, the Jamnagar complex will always remain a very special experience for us: a project of titanic proportions that took, for its completion, millions of engineering man-hours spread over many international engineering offices, hundreds of thousands of tonnes in equipment and material procured from leading suppliers all over the globe, highly advanced construction equipment of unbelievable sizes, construction workforce of over 75,000 working round the clock for months, a great number of innovative techniques of project execution and the project management expertise of Reliance painstakingly acquired over the past several years.

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**A vast complex**

The size of the Jamnagar complex is perhaps better appreciated through the following indicators:

- Total structural steel tonnage required for completing the complex is sufficient to construct nineteen **Eiffel towers**.
- Total cement concrete used for completing the complex is sufficient to create **ten buildings** like the **Empire State Building**.
- Total length of pipelines in the complex would be adequate to **link the northern and the southern tips of India or Seattle with Miami**.
- Total length of power and control cables in the complex, about 14,000 kilometers, could **link the eastern and the western parts of India six times over or cover the coastline of the USA**.
- All roads in the complex would connect **Mumbai with Pune**, a distance of 150 kilometers or **Los Angeles with San Diego**.

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**Refinery-cum-petrochemicals complex**

The Jamnagar complex primarily consists of a 27 million tonnes per annum refinery of RPL that is fully integrated with downstream petrochemicals units of RIL which manufacture naphtha-based aromatics as well as propylene-based polymers.

Fully equipped with facilities for meeting the captive energy requirements in the form of power and steam, the complex is well supported by world-class logistics and **port facilities**.

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**Refining processes**

The refinery complex at Jamnagar consists of more than 50 process units
which together process the basic feedstock, crude oil, to obtain various finished products deploying the following major refining processes:

- Crude oil distillation (Atmospheric as well as vacuum distillation)
- Catalytic cracking (Fluidised Catalytic Cracker)
- Catalytic reforming (Platforming)
- Delayed Coking

The following simplified schematic diagram shows how crude oil is refined to obtain various finished products.

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**Special features of the refinery complex:**

Our refinery configuration is characterised by its superior product slate compared to other refineries. Two important features in this regard are:

- High proportion of high-value products such as propylene and LPG (adding to over 10% on crude processed as compared to 2-3% for other refineries)
- Nil production of low-value "black oils" - fuel oil (compared to 12-20% on crude processed for other refineries) under normal circumstances.

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**Process technologies**

All process units of the Jamnagar complex are based on the State of the Art technologies. Some of the major such technologies are:

- Hydrodesulphurisation: UOP
- Catalytic Reforming Unit: UOP
- Fluid Catalytic Cracking Unit: UOP
- Delayed Coker Unit: Foster Wheeler Inc.
- Sulphur Recovery: Black & Veatch Pritchard
- Hydrogen Generation: Linde A G
- Merox Treating: UOP
- SHP / TAME* : UOP

* (Selective Hydrogenation Process / Tertiary Amyl Methyl Ether)
**World Scale Plants**

All process units in the Jamnagar complex, the largest grass-roots refinery complex in the world, are of world-scale sizes.

In fact some of the process units are the largest operating units in the world. A few examples

- Delayed Coking unit
- Fluidised Catalytic Cracking unit
- TAME (Tertiary Amyl Methyl Ether) unit

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**Township**

The complex includes a self-contained township, appropriately named as Reliance Greens, for over 2,500 of the employees and their families.

Sprawling over 415 acres of land, the township has been designed to provide the best possible residential, educational and recreational facilities to the employees.

The township includes fully furnished housing for the employees, as well as a medical centre, school, playgrounds, temple, community centers, health centers, banks, mall/supermarket, gas station, parks, swimming pool, golf course, tennis courts etc.