

Shikoku Operations/Oil Refining Facilities

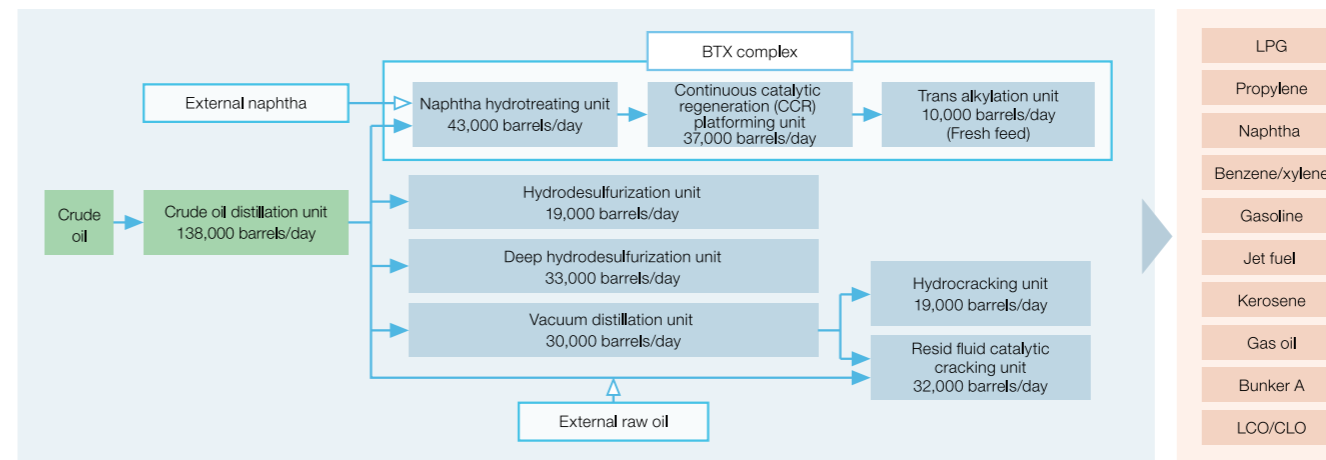


We respond to a wide range of petroleum needs with safety as our top priority.

As an integrated energy company, we respond to a wide range of petroleum and petrochemical product needs and meet customer expectations with our safe and stable operations.

[Imabari City, Ehime Prefecture]

Refining flow diagram



Crude oil distillation unit

Crude oil is distilled and fractionated into LPG, naphtha, kerosene, gas oil and residual oil.



Hydrocracking unit

This unit produces high-quality naphtha, kerosene and gas oil by mixing vacuum gas oil which is distilled from residual oil in the vacuum distillation unit with hydrogen gas and reacting it with a catalyst in a high-temperature and high-pressure atmosphere.



Resid fluid catalytic cracking unit

This unit produces propylene, LPG and gasoline fractions by decomposing heavy oil which is the raw material by contacting with a catalyst in a high-temperature and low-pressure atmosphere.



BTX complex

Benzene and xylene are produced by hydro-treating and catalytically reforming naphtha which is the raw material and then distilling, extracting and transalkylating the resulting reformate.

Shikoku Operations Refining and production capacity

Number of tank units and oil storage capacity

Crude oil storage tanks	9 units	638,406kl
Product and semi-processed product tanks	65 units	486,972kl
Tanks for petrochemical products	4 units	37,563kl
Slop tanks	4 units	18,691kl
Home fuel tanks	3 units	2,150kl
LPG tanks	13 units	11,862t
Molten sulfur tanks	2 units	2,340,000kg
Total	100 units	1,183,782kl
		11,862t
		2,340,000kg

Refining capacity 138,000 barrels (21,942kl)/day

No. 1 Crude oil distillation unit	1 unit	106,000 barrels (16,854kl)/day
No. 2 Crude oil distillation unit	1 unit	32,000 barrels (5,088kl)/day
Vacuum distillation unit	1 unit	30,000 barrels (4,770kl)/day
Hydrocracking unit	1 unit	19,000 barrels (3,021kl)/day
Hydrogen recovery unit	1 unit	1,036,800Nm ³ /day
Hydrosulfurization unit	1 unit	19,000 barrels (3,021kl)/day
Deep hydrosulfurization unit	1 unit	33,000 barrels (5,247kl)/day

BTX complex

Naphtha hydrotreating unit	1 unit	43,000 barrels (6,837kl)/day
Continuous catalytic regeneration (CCR) platforming unit	1 unit	37,000 barrels (5,883kl)/day
		(including 19,000 barrels/day for petrochemicals)
Aromatics fractionation unit	1 unit	34,500 barrels (5,486kl)/day
Aromatics extraction unit	1 unit	11,000 barrels (1,749kl)/day
Hydrogen recovery unit	1 unit	2,054,400Nm ³ /day
Trans alkylation unit	1 unit	10,000 barrels (1,590kl)/day
		(Fresh feed)
No. 2 Aromatics fractionation unit	1 unit	19,000 barrels (3,021kl)/day

RFCC complex

Reid fluid catalytic cracking unit	1 unit	32,000 barrels(5,088kl)/day
Propylene splitter unit	1 unit	7,100 barrels(1,129kl)/day
Alkylation unit	1 unit	7,200 barrels(1,145kl)/day
FCC gasoline hydrosulfurization unit	1 unit	17,000 barrels(2,703kl)/day