

## GLOSSARY AND TECHNICAL TERMS

*This glossary contains explanations of certain terms used in this document in connection with our Group and our business. The terms and their meanings may not correspond to standard industry meanings or usage of these terms.*

"ASME"	American Society of Mechanical Engineers
"boiler"	a common unit installed in an industrial plant which is used to generate steam
"catalyst"	a substance that improves the expected performance of a chemical reaction, for which it may remain unchanged
"catalytic cracking"	the process of breaking long-chain hydrocarbons into short-chain hydrocarbons by increasing the temperature and using catalysts, which is used in petroleum refining process to catalyse the procedures
"CDU"	means crude distillation unit
"clean energy"	energy that creates no emission or less emission than traditional energy sources such as crude oil and coal. Clean energy includes energy from renewable sources such as water, wind and the sun, and may include energy from natural gas or certain types of coal production and use
"CO"	means carbon monoxide
"coal chemical industry"	industry processes coal chemicals to produce gases, liquid and solids
"crude oil"	a naturally occurring flammable liquid consisting of a complex mixture of hydrocarbons of various molecular weights and other liquid organic compounds, which is used as the raw material for the production of oil and petrochemical products
"edulcoration"	process of removing acid or other impurities from a substance
"flue gas"	gas exiting to the atmosphere through a flue, which is a pipe or channel for conveying exhaust gases from a fireplace, oven, furnace, boiler or steam generator
"FCC equipment"	means a fluid catalytic cracking equipment which converts high molecular weight hydrocarbon fractions of petroleum to more valuable lower molecular weight hydrocarbon fractions such as gasoline, olefins and other products

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“heat exchanger”	means the equipment which is used to transfer heat from process outputs at high temperature to another part of the process, which makes industrial processes more efficient by capturing and re-using heat energy
“incineration”	means a waste treatment process that involves the combustion of organic substances contained in waste materials
“incinerator”	means a furnace or apparatus used for burning waste materials
“kPa”	means kilopascal, a unit of pressure measurement and one kPa equals to 1,000 Pa
“mg/Nm <sup>3</sup> ”	means milligrams per cubic meter, a unit commonly used to measure gaseous pollutants
“MTO”	means methanol to olefin
“NO <sub>x</sub> ”	means nitrogen oxide which is commonly produced from the reaction among nitrogen and oxygen during combustion of fuels
“Pa”	means pascal, a unit of pressure measurement commonly used in pressure gauge
“PM <sub>2.5</sub> ”	means fine particles that have diameter less than 2.5 micrometers which are commonly formed as a result of combustion of fuels and chemical reactions in the atmosphere
“ppm”	means parts per million, a unit of mass measurement per unit volume of water
“Process burner”	means furnaces that provide energy through combustion which can then be used to produce various intermediate and final products in petroleum refinery and petrochemical equipment industry
“reactors”	means pressure vessels commonly used to perform reaction procedures of single-phase and multi-phase
“SRU”	means sulphur recovery unit, being the equipment that operates the conversion of hydrogen sulfide to elemental sulfur
“Sulphur recovery”	means the conversion of hydrogen sulfide to elemental sulfur which is a common process for gas processing plants and refineries to minimize the amount of sulfur compounds emissions
“VDU”	means vacuum distillation unit
“VOC(s)”	means volatile organic compounds which have high vapour pressure at room temperature and cause air pollution and smog