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The internal product network represents a fundamental Feed Products Intermediates Sales Products source of economical advantages for new industrial projects. The integration effects resulting from the exchange of materials between the onsite companies improve their cost positions remarkably.

The backbone of this network is the refinery (TOTAL), the synthesis of caprolactam (DOMO), involving all stages of production beginning with benzol, and the manufacture of technical gases (Linde).

The refinery which has a partial oxidation and a methanol synthesis as an outlet for heavy residues, supplies methanol for the production of methylamines (Eastman). Carbon monoxide is an intermediate product in the production of methanol and is partially further processed to dimethyl formaldehyde (Eastman). Hydrogen sulfide is used for the production of inorganic products by a medium-sized company (Quadrimex).

The synthesis of caprolactam uses propene and sulfur from the refinery while oxygen and hydrogen are provided by the LINDE gas center.

The gas center and its core plants, the air separator and the steam reformer, provides pure oxygen and nitrogen for the partial oxidation and hydrogen for the hydrogen peroxide plant (ARKEMA).

FEED PRODUCTS

- Acrylates
- Air
- Ammonia
- Benzene
- Bisphenol A
- Butadiene
- Calcium oxide
- Chlorine
- Crude oil
- Ethylene
- Ethylene oxide
- Fatty acid
- Formaldehyde
- Glycerine
- Natural gas
- Paraffins
- Phosphorus trichloride
- Plant oils
- Polyamide
- Polyamines
- Salt
- Styrene
- Sulfur
- Sulfur dioxide
- Titanium dioxide
- Various alcohols and solvents
- Various organic raw materials
- Vinyl acetate

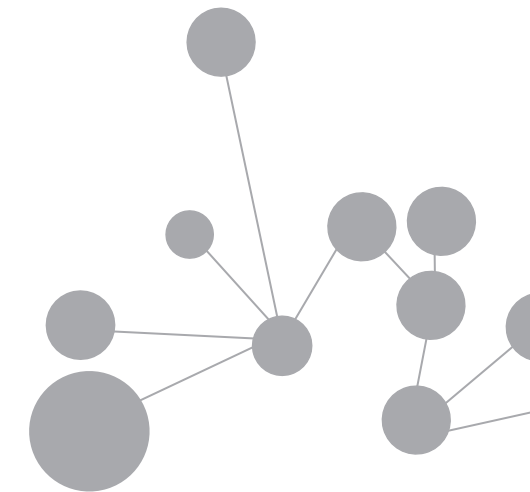
INTERMEDIATES

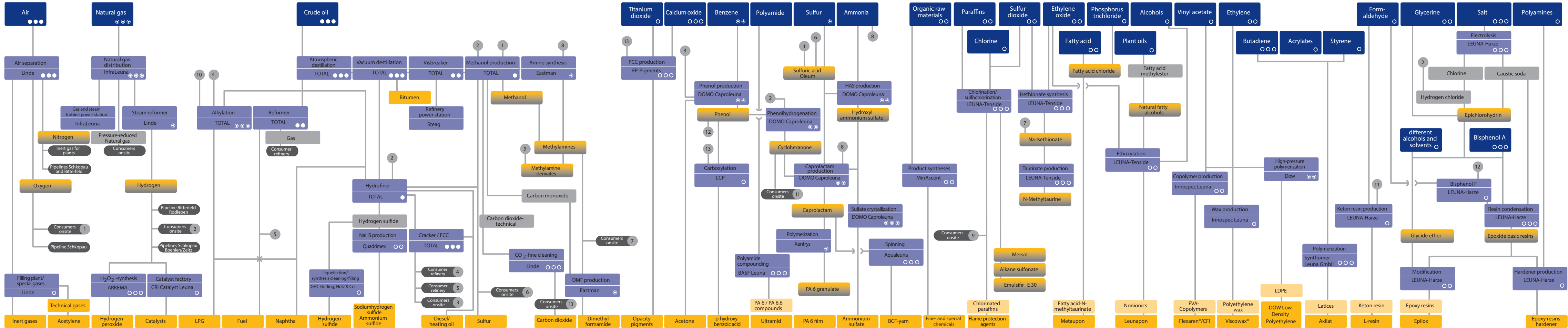
- Alkane sulfonate
- Caprolactam
- Carbon dioxide technical
- Carbon monoxide
- Caustic soda
- Chlorine
- Cyclohexanone
- Emulsifier E 30
- Epichlorohydrin
- Epoxide basic resins
- Fatty acid chloride
- Gas
- Glycid ether
- Hydrogen
- Hydrogen chloride
- Hydrogen sulfide
- Hydroxyl ammonium sulfate
- Mersol
- Methanol
- Methylamine
- Methylamine derivates
- Na-Isethionate
- Natural fatty alcohols
- Nitrogen
- N-Methyltaurine
- Oxygen
- PA 6 granulate
- Phenol
- Pressure-reduced Natural gas
- Propene/Propane
- Sulfuric acid/Oleum

SALES PRODUCTS

- Acetone
- Acetylene
- Alkan sulfonate
- Ammonium sulfate
- Ammonium sulfide
- BCF-yarn
- Bitumen
- Caprolactam
- Carbon dioxide
- Catalysts
- Chlorinated paraffins (Flame protection agents)
- Cyclohexanone
- Diesel/heating oil
- Dimethyl formamide
- Emulsifier E 30
- Epichlorohydrin
- Epoxy basic resins
- Epoxy resins (Epilox)
- Epoxy resins hardener
- EVA-Copolymers (Flexaren®/CFI)
- Fatty acid chloride
- Fatty acid-N-methyltaurinate (Metaupon)
- Fine and special chemicals
- Fuel
- Glycidether
- Hydrogen
- Hydrogen peroxide
- Hydrogen sulfide
- Hydroxyl ammonium sulfate
- Inert gases
- Keton resin (L-resin)
- Latices (Axilat)
- Low Density Polyethylene (DOW LDPE)
- LPG
- Methanol
- Methylamines
- Methylamine derivatives
- Na-Isethionate
- Natural fatty alcohols
- Naphtha
- Nitrogen
- N-Methyltaurin
- Nonionics (Leunapon)
- Opacity pigments
- Oxygen
- PA 6/PA 6.6 Compounds (Ultramid)
- PA 6 film
- PA 6 granulate
- Phenol
- p-hydroxy-benzoic acid
- Polyethylene wax (Viscowax®)
- Sodium hydrogen sulfide
- Sulfochlorinated paraffin waxes (Mersol)
- Sulfur
- Sulfuric acid/Oleum
- Technical gases

LEUNA
MAIN PRODUCT LINES





Legend



Intermediates

- | | | | |
|----------------------------|---------------|---------------------|--------------------|
| 1 Oxygen | 5 FCC-Benzine | 9 Hydrogen chloride | 13 CO ₂ |
| 2 Hydrogen | 6 Sulfur | 10 Acid sulfur | |
| 3 Propene/Propane | 7 Methylamine | 11 Cyclohexanone | |
| 4 C ₄ -fraction | 8 Ammonia | 12 Phenol | |

Product quantity: [kt / a]

- | | | |
|----------------|------------------|-------------------|
| ○ < 5 | ⊙ > 50 to 100 | ● > 500 to 1000 |
| ○○ < 5 to 10 | ⊙⊙ > 100 to 200 | ●● > 1000 to 2000 |
| ○○○ < 10 to 50 | ⊙⊙⊙ > 200 to 500 | ●●● > 2000 |