

Process Vessels



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Escher Process Modules (Escher) has built up a worldwide reputation in the oil, gas and chemical industry for the design, fabrication and 'on-time' supply of process vessels. The process vessels that are supplied include gravity separators, crystallisers and extractors. Our process vessels are engineered and designed using the latest, most modern design technology to ensure optimum operation and cost of ownership. The process and mechanical knowledge gained from years of experience has been applied to Escher's process vessels of today. Each project is processed on an individual basis in accordance with the specific client and project requirements. All process vessels are delivered according to high quality standards with a process and mechanical guarantee and are supported during their lifetime.

Gravity Separators

The majority of separators in the oil and gas industry are gravity separator vessels. They all have one thing in common which is that they rely on gravity forces to achieve separation. Installing internals that ensure good flow distribution and enhanced separation in the gravity section, enables the gravity separator vessel to perform at a high level of efficiency. Enhanced gravity separation results in an optimal overall performance of the separator while its dimensions are minimised.

Knowledge and experience about vessels and internals gained over the years are integrated into Escher's enhanced gravity separators.

Crystallisers

There are various types of crystallisers on the market (based on evaporation or cooling and discontinuous or continuous). The crystalliser that Escher delivers is a continuous crystalliser that works on the cooling principle. This crystalliser is distinguished by its efficiency, easy maintenance and high level of reliability. Secondly the flexibility of the design permits the unit to be made and used efficiently in a wide range of sizes and throughputs.

Crystallisers can be used for many crystallisation processes, including paraxylene production. The crystalliser consists of a long vessel with a cooled wall. The vessel is continuously fed by a feed solution from the top of the vessel. By lowering the temperature of the solution via the vessel wall, the solubility of the solution will decrease and crystals will start to grow. A set of longitudinal scrapers will then scrape off crystals that form alongside the vessel wall. The solution, together with crystals, is continuously discharged from the bottom of the vessel.

Extractors

The Rotating Disc Contactor (RDC) was developed in the late forties. For years and years, the RDC has been used largely in the petroleum industry as well as chemical industry. The RDC has proven its value as a flexible extractor for high throughputs in both small and large-scale operations. It can be used for liquid-liquid and liquid-solid contacting for extraction, washing or chemical reaction. The RDC is a vessel with internal rotating discs to maintain a dispersion of two phases that are fed counter current.

The process and mechanical knowledge gained from years of experience has been applied to Escher's Process Vessels of today

International Codes

Escher offers its extensive experience in design and engineering in accordance with the following international standards:

- ASME
- U-Stamp
- PD5500
- EN13445
- ASME VIII division 1 & 2
- BS5500
- AD-Merkblätter
- CODAP
- API
- SVDB
- TBK 2
- ARAB
- PED



From the beginning, Escher has been manufacturing RDCs (Rotating Disc Contactors) for several applications and has built up a highly respected reputation by constantly improving its mechanical design. The flexibility of the design permits the unit to be made and used efficiently in a wide range of sizes and throughputs, making it a particularly valuable tool for many extraction processes in the chemical, petrochemical and petroleum industry. Escher's RDCs run vibration-free and have a low maintenance rate.



We provide solutions for challenging requirements

Applied Materials

In the past, a wide variety of materials have been used in the fabrication of plants and equipment for the petrochemical and chemical industry. The main materials used in construction include:

Carbon Steels:

- Fine Grain Steels
- Mo and Cr.-Mo Steels
- WB36

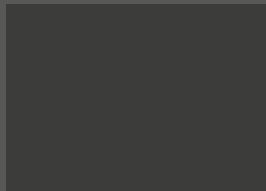
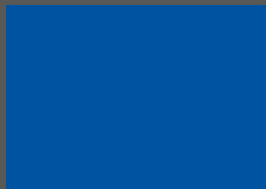
Stainless Steels:

- Ferritic/Austenitic/Martensitic
- Austenitic heat resistant
- Nickel Chromium Alloys
- Duplex
- Incoloy 800H
- 9% Ni

Cladding (Rolled and Weld Overlay):

- Austenitic Stainless Steel Clad
- High alloy non-ferro steels, including Monel, Inconel 625, Incoloy 825, Hastelloy and Ni-alloy





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