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Core Department

DODGEN R&D

Focuses on the research of high value-added products, such as green chemicals, special chemicals, and degradable new material.



DODGEN Equipment

Provide chemical unit reaction and separation process equipment manufacturing under strict quality management system.



DODGEN Technology

Provide process solutions, design, engineering and technical support for project such as installation, start-up and so on.



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DG™ DSR Heat Exchanger Application in LYOCCELL Industry



Shanghai Dodgen Chemical Technology Co., Ltd. (DODGEN) is a high-tech company, which integrating process technology development, unit equipment supply, new materials research and application.



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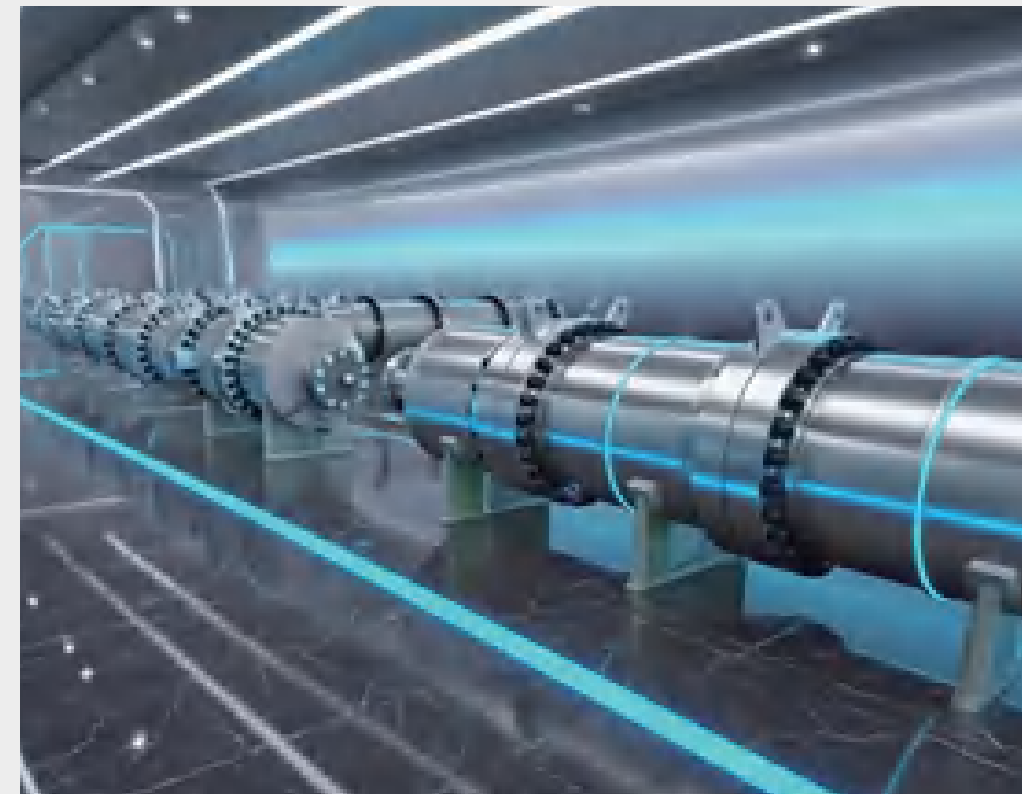
DG™-DSR Heat Exchanger

- DG™ DSR heat exchanger is designed based on the principles of static mixing and high-efficiency heat transfer. Its unique characteristics is providing extremely high heat transfer capacity while precisely controlling heat transfer and mixing efficiency.
- Typically, a DSR heat exchanger consists of several series-connected tube bundles, divided into several independent temperature and mixing zones. This forces the original parabolic curve flow to be changed into plug flow, thereby achieving uniform distribution of residence time.
- The DSR's densely distributed high heat transfer surface area provides reliable heat dissipation and fluid temperature control, achieving the best process control.
- Due to the excellent control of fluid flow and temperature, the DSR heat exchanger is also highly suitable for use as a reactor for polymers and for heat exchange of high-viscosity fluids.



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Application in LYOCELL Industry



The DG™-DSR heat exchange has been successfully applied in **a 75kt/a Lyocell fiber production line**, which is the biggest single line in the world for Lyocell fiber.

- As the heat exchanger and temperature equalizer of the glue solution discharged from the thin-film evaporator
- As the heat exchanger and temperature equalizer of the glue solution after filtration and before spinning

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Specialized Advantages for Lyocell

DG™-DSR heat exchanger **specially designed for lyocell dope** has the following advantages:

- No dead zones, uniform distribution
- Cross-flow of materials within the DSR ensures uniform temperature distribution
- Anti-wall flow, resulting in better mixing effect
- It operates stably and reliably under high viscosity and high pressure drop conditions, and precisely controls the temperature of the Lyocell dope
- Easy for maintenance

