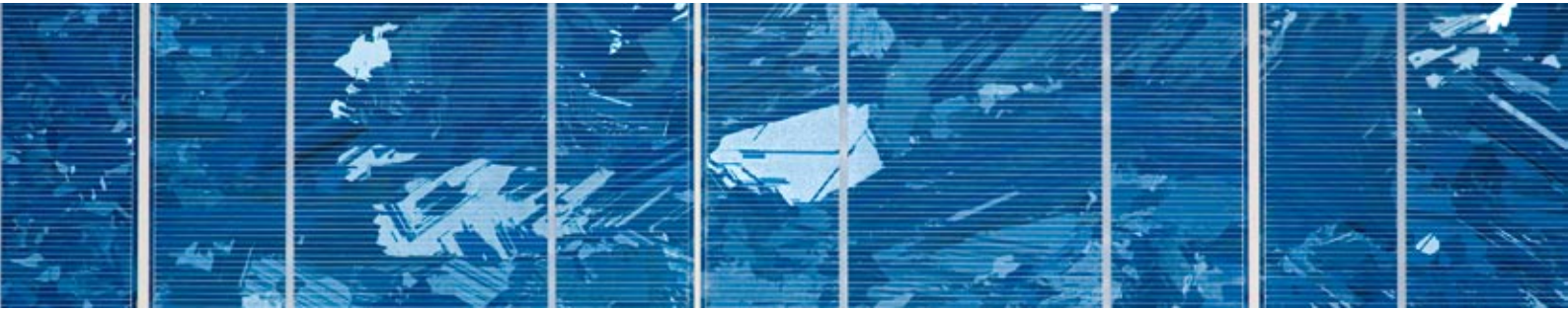


- ARMATUREN U. KOMPONENTEN FÜR
- GASE-, KRYO, U. ENERGIETECHNIK
- LUFT-, SCHIFF- UND RAUMFAHRT



Stoehr's experience in valve design and manufacture ensures safe and secure system operation.

The new generation of sustainable energy is yet another demanding technological area for Stoehr. Its tremendous potential is slowly becoming more evident and rapid growth can be expected. Direct utilisation of solar energy is a particularly interesting aspect and is a worldwide boom. With the increasing investment in systems for the production of Solar Silicon being required and safe production of pure Silicon a necessity, safe and reliable valves to control the process media are in high demand

Stoehr valves have been proven and tested within all prevailing conditions for the production of pure Silicon and have been supplied into and are in operation in production facilities worldwide.

In this industry the main process media's involved are Trichlorosilane and Tetrachlorosilane and there is a requirement for high quality manufacturing materials and internal surface finish to ensure a very heat in leak rate. This becomes even more important when the process includes Monosilane.

Stoehr valves are designed to meet the stringent requirements pertaining to the production of Solar Silicon and have special designs to ensure safe operation. One example of this is FREES, our Minimised Clearance Cryogenic Valve: All cryogenic media requires an evaporation space incorporated in the design of the valve, this space is even more critical for flammable fluids like Monosilane. Valves and pipeline has to be safely evacuated and flushed prior to commissioning and during maintenance to avoid any risk. Stoehr's design, which has a significantly smaller evaporation space, reduced in size to the smallest that is technically possible, ensures maximum safety during all critical work. An additional advantage with this valve is that it can be mounted in any direction to ensure installation in the available space leading to ease of pipeline design, system planning and installation.

Stoehr as a company designs innovation into all our products to ensure safe process control. For control and regulation of various process media Stoehr offer compact valve units with an integrated purge valve which are equipped with a bellow seal and are fully lockable to prevent tampering. Depending on requirement and application Stoehr valves can be electro polished to 0.25 micron. This surface finish leads to reduce of wear to all components that come in contact with the medium.

The Stoehr valve range covers all temperature requirements from cryogenic through normal to very high temperatures.

Stoehr specialises in solving extreme problems, please contact us and we will be able to advise you in valve application, valve selection and the manufacturing and seal materials require to optimize the operation of your system.

STÖHR Valves – meet the extremes.

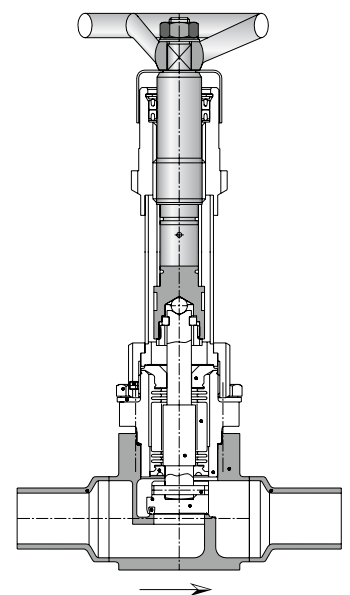
Stoehr offers reliable support to all complex processes.

Pure Polycrystalline Silicon is the main component for solar cells and integrated circuit boards. The production of Polycrystalline Silicon requires several steps. The raw Silicon is mixed with gaseous hydrogen chloride in an sorption reactor to create Trichlorosilane.

The main by-product being Tetrachlorosilane. Then the Tetrachlorosilane is converted to create more Trichlorosilane by adding hydrogen in a further sorption reactor process. The next step is Trichlorosilane rectification during the course of which valuable Polycrystalline Silicon is finally obtained via Trichlorosilane Pyrolysis.

If Monosilane is used during this step instead of Trichlorosilane the process can be run at a lower temperature.

The production of pure Silicon must be seen as a highly complex process. Let Stoehr's innovative valves and technology provide the reliable support that you need.



meet the ...
Extremes



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