Swagelok

Power

Swagelok Solutions

Your Partner in Keeping Your Power Plant to Light The Nation.

Challenges In Power Generation

Indonesia has around nearly 35000 MW of electricity. It is home for combined cycle gas power plant, coal fired power plant and renewable power plant like geothermal power plant.

Power generation plays a critical role in energy conversion, sustainable national energy and the recovery of the economy. New Power plants worth billions of investment ready to commercialize, renewable energy is also playing a part to create sustainable energy beside fossils.

Challenges in operations or in the new construction of new power plants are more even critical to keeping earnings high and costs low, they are faced with increasingly tighter operational challenges.

Corrective maintenance, sudden shutdowns— any of these can shift the balance of power away from production and into lost revenue. The last thing you want to worry about is a leaking or failed component. Easy to install and operate, these solutions offer high quality and the support you can expect from Swagelok.

Ensuring Top Performance of the Asset

Keeping the top performance of the fluid system assets is a challenging task for a power plant. Swagelok Indonesia can help you solve your problem and minimize your risk through our 75th years of experience in fluid systems with Swagelok quality products. Our subject matter experts will help you keep your plant running efficiently.

Safety and Personnel Protection

Handling of geothermal steam that might have hydrogen sulphide can be a safety hazard for workers in your plant.

Therefore, leakage and failure of the fluid system are not an option. Equipment used must be designed to handle corrosive media, high pressure, and high temperature.

Swagelok Indonesia can help you to select the right product based on your application to ensure your plant's safety and system efficiency.

Service and Maintenance

Competent consultations, detailed project review by Swagelok regional field engineers which are both a subject matter expert and are based locally, are able to provide technical advice as per the local requirement.

Our capabilities include:

- Engineering and P&ID review
- Site supervision
- Improvement of the fluid systems
- FSEAS (Fluid System Evaluation Advisory Service)
- Training
- Supply chain management

Swagelok Indonesia provides all these services with a team of well-trained personnel.

Steam Supply Pipeline Applications

Geothermal steam pipeline applications, monitoring the pressure, temperature and flow are critical tasks ensuring there is no malfunction at the pipeline systems. Accuracy at instrumentation reading is key to the performance of the systems.

Swagelok understands that geothermal power plants demand that fluid system components are designed and manufactured to withstand high temperature and high pressure like superheated steam, nasty chemicals, etc.

From geothermal wells into power plants and returns into the earth. Swagelok created products and services that are tailored to your needs.

Alloys and Combating Corrosion

Steam and heat are given by mother earth. The majority of geothermal steam contains H2S hydrogen sulphide and other gases that might create corrosion in the systems.

Swagelok offers a wide range of alloys and works closely with customers to solve their needs for fittings with enhanced chemical and corrosion resistance.

Standard options include:

- 316 Stainless Steel
- 6 Moly
- Alloy 20
- Alloy 400
- Alloy 600
- Alloy 625
- Alloy 825
- Alloy C-276
- Alloy 2507
- Titanium (Grade 4)

Swagelok Engineered Combination

Swagelok can engineer a cost-efficient and corrosion-resistant solution for installations exposed to corrosive media.

Elevated chromium and nickel levels in our fittings mean we can offer engineered combinations as a rated alternative to full exotic alloy solutions in certain applications.

Rather than a traditional alloy-to-alloy tubing and fitting combination, Swagelok's innovative thinking combines 316 stainless steel fittings with 6 Moly, 904L, Tungum®, and Alloy 825 tubing.

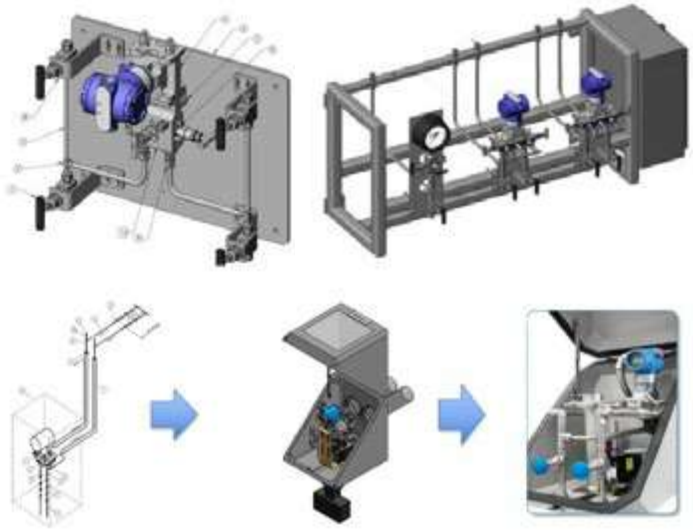
Tap to Transmitter Solutions - Instrumentation

Our focus with process instrumentation products is to deliver a system from process connection to instrument that has the quality you depend on from Swagelok and the accuracy you require from your measurement device.

Swagelok® valves, tubing, manifolds, plugs and flanges form an instrumentation loop that controls and reports rates of variables, such as pressure and flow, back to either a control device or a controller overlaid with a networked communication protocol.

We ensure the integrity of your fluid system and we help provide reliable data about your process, hence you can control and refine it. All of this leads to in-spec production, less downtime and less threat of process contamination or environmental damage.

Swagelok® custom solutions able to help you to convert from tap to transmitter concept into solution.



Boiler Application

Swagelok understands that coal-fired steam power demands can withstand high temperature and high pressure like superheated steam, nasty chemicals, etc.

From the steam water sampling system to the instrument impulse line, Swagelok created products that can withstand the high temperatures and high pressures in the plant.

Swagelok offers a solution with reliable valves that rate up to 648°C / 1200°F & Manifold rated to 537°C /1000°F capable of withstanding pressures up to 6000psig.

Steam Turbine

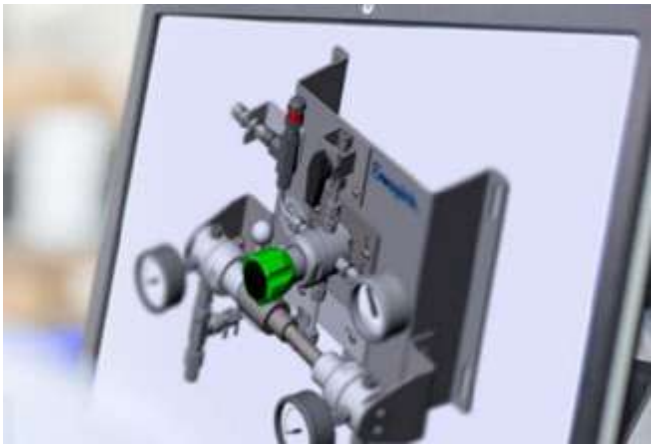
Do not risk your personnel's safety with the high-temperature, high-pressure and vibration applications in your plant.

Swagelok offers reliable products that are engineered and designed for high-temperature applications. This tube fitting with 316H material which is higher in tensile and yield strength than 316/316L coupled with its austenitic structure provides excellent toughness and is rated for use at temperatures up to 1200°F (648°C).

Swagelok® tube fittings also have a grip-type design that uses a unique "hinging and collecting" action to achieve optimal performance in high pressure up to 10200 psig* and high vibration applications.

*Swagelok® tube fittings ends are rated to the working pressure of tubing as listed in Swagelok® tubing data, MS-01-107.
Careful selection of high-quality tubing is important when installing safe, leak-tight systems.

Gas Distribution System – Hydrogen Plant



Swagelok® gas distribution systems can be built in many configurations to suit the needs of your application in your Hydrogen Plant to help your generator cooling system work well. We can design and assemble a system that meets your exact requirements.

Our engineers will collaborate with your team, to deliver a system that is:

- Custom designed, assembled and tested custom solutions
- Built with minimal connections to reduce potential joint
- Clearly labeled for safety and functionality
- Easy to understand and operate
- Simple to troubleshoot and perform routine maintenance services
- Delivered on time and on budget
- Support for after sales services

Grab Sampling System and Sampling System Evaluation – Gas Metering Station

Inaccurate samples can result in sampling system inefficiency, affecting overall quality of your gas delivery outputs. Improve your sampling system accuracy by having experts visit your facilities to conduct in-depth analysis of your sampling systems, from process tap to analyzer.

Swagelok® sampling system evaluation and advisory services ensure your samples are representative of process fluids, are delivered to the analyzer in a timely manner, and are compatible with the analyzer.

Swagelok Indonesia provides all these services with our own fully trained personnel.

- Representative sampling to ensure your fuel quality with desired specification
- Safety of your personnel
- Robust equipment and functions
- Environmentally friendly

We build our Swagelok® grab sampling system based on international standards and proven best practices from our expertise.

(GSM-G-1-N1)

Use:
General use for gas sampling.
Recommended for:
Non-toxic gases and systems when the return is sent to flare.

Swagelok Indonesia can build any grab sampling system for any application.

Sampling Conditioning System for Your Analyzer Needs

Pre-engineered and pre-assembled fluid sampling and control subsystems bring efficiency and consistency to your operations. Use Swagelok® pre-engineered subsystems to create fully documented fluid sampling and control systems without the worry of acquiring and assembling multiple parts.

For use in all types of plants and facilities where fluids are processed, our proven sub-assemblies minimize system footprints, simplify system design, and promote representative samples and accurate analytical results.

Swagelok field engineers can help you to design sampling conditioning system based on your analyzer needs.

Following objectives of Swagelok® Sampling Conditioning System:

- Timely representative
- Compatible with the application
- Safety of your personnel

Fuel Delivery System

In Gas Turbine application, leakage on fuel system is not tolerable. At the same time, vibration is something that we could not avoid.

Swagelok® tube fittings comes with SAT 12 patented design in fuel delivery system, that could stand with high vibration at the same time zero leakage that makes Gas Turbine performs at its peak performance.

Swagelok Indonesia can help optimize your Gas Turbine fuel delivery system.

Hoses Selection and Hoses Advisory Services - Fuel Delivery System

Failed hose assemblies in your Gas Turbine or Lube Oil Systems application require time and resources you may not have. Even worse, because of hoses, your system may be down due to fuel leakage that may danger the safety of personnel or the turbine itself.

Count on us to select the hose based on the desired application. It's better to be prepared by taking a preventative approach. Whether you have experienced any of these issues or understand that your business is at risk for them, turn to Swagelok® Hose Advisory Services.

We survey your entire hose system and determine how to best prevent downtime, rework, and delay.

Rental Capabilities

Why should you rent from Swagelok Indonesia?

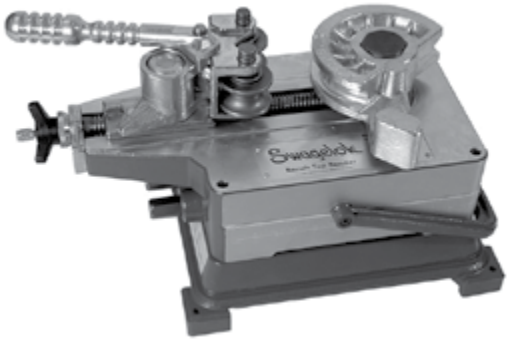
- No ongoing calibration costs
- No upfront capital outlay
- No depreciating assets
- Reserve capital for core business
- Avoid obsolete technology

Hand Tube Bender

Swagelok hand tube benders provide consistent, high-quality bends in tubing made from materials that can be used with Swagelok® tube fittings.

Tube Size	Bending Radius
¼ inch	9/16 inch
¼ inch	3/4 inch
3/8 inch	15/16 inch
½ inch	1 ½ inch
6 mm	15 mm
8 mm	24 mm
10 mm	24 mm
12 mm	38 mm

Bench Top Tube Bender



Swagelok Bench Top Tube Bender has a rugged, lightweight aluminum construction and is ready to bend 1/4 to 1 1/4 in. outside diameter (0.028 to 0.120 in. wall thickness) and 6 to 30 mm outside diameter (0.8 to 3.0 mm wall thickness) tubing range.

Orbital Welding MS-200

The Swagelok welding system M200 power supply offers precision and control combined with easy-to-use touch-screen operation for orbital welding.

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Or contact us, your local Swagelok
sales and service center, here:
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