

Sealing Devices

WTO Environmental Goods Agreement

“The aim is to create “win win win” situations for trade, the environment, and development.”

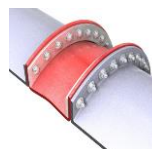
DOHA Environmental Agenda, WTO Website

Why Do Sealing Devices Matter?

- Sealing devices prevent leakage of gases and liquids. Their primary role is to prevent emissions to air, water and land, thus they are also an important contributor to more efficient water and energy use.
- Sealing devices are essential for the protection of the environment, they allow safe functioning of equipment and systems with respect to explosion protection.
- Used in virtually every industry: energy (oil, gas and low-carbon), all forms of power generation, and general industrial sectors (pharmaceutical, potable and wastewater treatment, pulp and paper, metallurgical, mining, aerospace, marine etc.).
- Given the critical importance of sealing devices to prevent emissions within the energy sector, liberalized trade ensures greater environmental sustainability, as energy consumption continues to grow: the International Energy Agency projects that global demand for energy will increase 37% by 2040, with more than half of world’s energy demand met by oil and gas.
- Sealing devices prevent emissions from all industrial processes especially short-lived climate pollutants, like methane, hydrofluorocarbons and volatile organic compounds (VOCs). Reduction of short-lived pollutants can slow the increase in global temperatures and provide significant benefits for human health, air quality and ecosystems.

Sealing Device Technologies

MECHANICAL SEALS FLANGE GASKETS COMPRESSION PACKING EXPANSION JOINTS ELASTOMERIC SEALS



EMISSIONS PREVENTION:

Sealing devices are on the front lines against climate change by preventing emissions of:

- Short-lived climate pollutants, like methane, hydrofluorocarbons and VOCs
- Toxic or hazardous fluids and chemicals
- Valuable raw materials
- Steam and wastewater



SEALING TECHNOLOGY BENEFITS:

- Provides significant savings of water consumption by industrial equipment
- Energy efficiency - energy savings from optimisation of water usage; maximising efficiency by containing heat with less energy consumed due to low friction and minimised cooling



SEALING DEVICES ARE IMPERATIVE IN LOW CARBON & CLEANER TECHNOLOGIES:

- Heat transfer oils in solar energy farms
- Solid Oxide Fuel Cells (SOFC)
- Wind and subsea turbines
- Biomass plants
- Geothermal power generation
- Hydroelectric power generation



SEALING DEVICE PLACEMENT ON THE ENVIRONMENTAL GOODS LIST WILL:

- Support local businesses and will boost trade and supply of related services, as majority of sealing device companies are small and medium size businesses
- Broaden awareness for the important role sealing device technology plays to battle climate change
- Expand availability and lower costs; enabling greater market access for modern sealing device technology

A typical refinery will use over 120,000 sealing devices!



“Over the next 15 years the world will make a massive investment in new infrastructures in cities, energy and agriculture. If this spending is directed towards low carbon goods, technologies and services, we will be on our way towards a more sustainable, equitable and climate resilient society.”

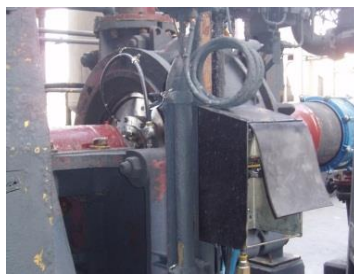
Ban Ki-moon, UN Secretary-General

Preventing Emissions Example:

Before:



After:



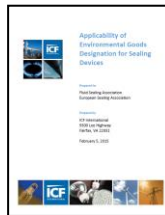
Remote mining site in Australia. Photo of a pump converted to modern mechanical seal technology. Before and after photos clearly illustrate environmental impact - no mess or pollution from leaking.

Sealing Devices Improve Safety

- Contain hazardous products
- Eliminates leaks of corrosive chemicals or explosive gases



“It is clear that sealing technologies are important environmental mitigation technologies and should be eligible for designation by the WTO as environmental goods.”



ICF Report on the “Applicability of Environmental Goods Designation for Sealing Devices”

Within the European Commission ATEX legislation, it is recognized that sealing devices can be essential to the safe functioning of equipment and protective systems with respect to explosion protection.

Primary Supply Countries to the EU and USA

