

Hot water distribution for solar technology

Installation of a new Pexgol pipeline to provide hot water for a electro-thermal storage system.



Raygen
Australia | 2021

• Working Conditions

Pressure: 4 bars
Temperature: up to 90°C / 194°F

• Pexgol Pipe

Pexgol 200 (8"), Class 12

• Application

Hot water distribution

• Length

2160 m / 7086 ft

The Challenge

RayGen is an Australian technology company with world-leading breakthroughs in solar power technology and renewable energy storage.

They required to provide cooling water to their concentrated solar towers. Then the water needed to return from the towers at 90°C to the thermal storage.

The Solution

The client decided to install a Pexgol system (pipe and fittings) for its operation, after considering the following benefits:

- Corrosion resistance at elevated temperature without the need for coatings (compared to metallic piping).
- Ease of installation due to long coil lengths reducing welding/connections and flexibility (compared to metallic and other rigid 6-12 m pipe lengths).
- Low thermal expansion forces allowing direct burying without the need for extra expansion allowance (compared to metallic piping)
- Pexgol natural bending radius - Using the natural bending capabilities allowed reducing connections, parts and pressure drop.

The pipes were installed under ground without special pipe protection and were insulated using PIR foam sprayed directly around the pipes, after pressure testing. Then backfilled directly on top.

Special Reinforced EF Couplers Series 2 (up to 90°C) were welded.



The Advantages of Pexgol Pipe Systems

PEXGOL
X-LINKED PIPING SOLUTIONS



High resistance to wear

Pexgol is the preferred solution for abrasive materials transportation. Typically resists three times more than HDPE and twice more than steel.



Superb internal and external corrosion resistance

Our pipes are proven to withstand decades of exposure to corrosive environments, with nonstop performance in some of the world's harshest environments.



Excellent chemical and corrosion resistance

Pexgol pipes can resist a wide range of chemical agents, slurries, toxic and radioactive materials.



Long pipe sections

Pexgol pipes can be supplied in long coil lengths, reducing number of joints, installation time and risks.



High temperature resistance

Working temperatures can range from -50°C/-58°F up to 110°C/230°F.



Creep and impact resistance

Pexgol pipes can withstand high amounts of axial and radial stresses and are highly resistant to impact, fracture and fatigue. Furthermore, Pexgol pipes are completely resistant to cracks even when dragged over sharp rocky terrain and coagulated salt crystals.

For more information please visit:
pexgol.com

