



# Çöpler Sulfide Expansion Erzincan, Turkey

Client: Anagold Madencilik Sanayi ve Ticaret A.S.  
2016 – 2018

Expansion of a mine for gold production

New plant complex for extracting gold from sulfide ore



### Initial situation

**Gold has been mined in the Çöpler mine since 2010. Until now, the precious metal was mainly extracted from oxide ore.**

In addition to this, more gold is to be extracted from the existing sulfide ore in the mine in the future. A different process is utilized for this – pressure oxidation. The mined ore is heated and the gold is dissolved out of the ore under pressure. An additional plant complex will have to be added to the mine for this purpose.

### Special challenges

During gold mining, extremely abrasive media are conveyed through the pipelines. Solids and corrosive substances such as sulfuric acid or sodium chloride attack the valves and must not be allowed to reach the atmosphere. High temperatures and pressures as well as relatively frequent opening and closing additionally stress the valves.

Sistag team on site at the Çöpler mine



## Approach

# Almost all the valves manufactured for the expansion of the Çöpler mine are customized products.

The most robust knife gate valves in the Wey range were used in the form of the W and HD series. Special materials, coatings and accessories make them extra resistant to corrosive acids, abrasive solids, high operating pressures up to 80 bar and temperatures of up to 220°C. The valves were manufactured partly at Sistag's plant in Switzerland and partly at the plant of its subsidiary Wey Valve Inc. in the USA. Sistag specialists from Sales Support and Engineering were on site three times to view the plant in Turkey and plan the valves required.

Wey knife gate valves of the W series are used in acidizing, pressure oxidation and tailings treatment, among other applications. With bodies made of super duplex stainless steel, they meet the highest corrosion protection requirements of the plant.

Wey high pressure knife gate valves HD are installed in the pump building. Here, the ore slurry residues are pumped at over 80 bar pressure over a distance of more than 4 km.



#### **Special material**

The W knife gate valves are partially made of super duplex steel to be resistant to acids such as cyanide.

#### **Special coating**

The bodies of the HD valves have been coated with tungsten carbide using HVOF and the gate has been stellite-coated for added hardness and resistance.

#### **Wear rings**

Stellite wear rings provide additional longevity to the interior of the valve body and have been custom made for this order.

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#### **Category**

# **Knife gate valves**

#### **Product series**

# **HD, W0, W3**

#### **Nominal sizes**

# **50 - 800**

#### **Actuator**

# **Manual, Pneumatic, Electric, Electric- hydraulic**

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#### **Body material**

# **Stainless steel, Special material**

#### **Maximum pressure**

# **82 bar**

#### **Sealing type**

# **FEPM, PTFE, PUR**

#### **Number of valves**

# **319**

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«Our conveyor system is exposed to extreme conditions. All components must be able to withstand them – and Wey valves do.»

**Kenan Özdemir**

Operations Director,  
Anagold Madencilik Sanayi ve Ticaret A.S.

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**Commissioning**

**2018**

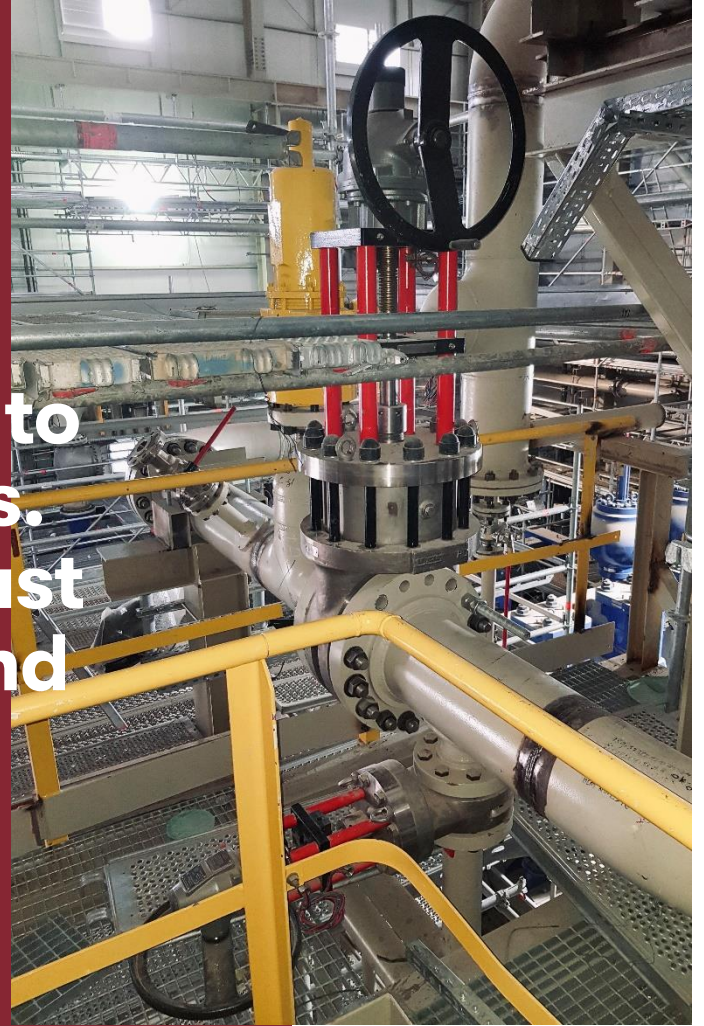
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**Cooperation**

Technical and commercial specifications of the valves were prepared by WOOD PLC Turkey & Italy and closely coordinated with Sistag. Spare parts and service for ongoing operations are provided by our Wey distributor in Turkey, Sunsay Mühendislik.

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The expanded Çöpler Mine plant has been successfully producing gold since 2018. The Wey valves used are functioning as intended. Due to the difficult conditions in mine operation, wear is high as expected and valves are continuously upgraded or replaced.



Wey knife gate valve HD  
in the plant's pump  
building

**Contact us to  
discuss your  
individual  
application.**  
**We show  
solutions that  
work.**

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