EURO MEC®
water treatment plants

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## AT A GLANCE

**Location:**
Gazzoldo degli Ippoliti,
Mantova, Italy

**Client:**
Marcegaglia Spa, steel works

**Type of project:**
Design, manufacture & supply

**Water treatment plant:**
Chemical-physical industrial waste water treatment plant

**Raw water:**
Industrial waste water coming from steel working processes

**Treated water quality:**
Optimum for application in industrial processing

**Capacity:**
230 m3/hour

EU 273908FB

# TREATMENT AND REUSE OF INDUSTRIAL PROCESS WATER

Marcegaglia Spa is a leading industrial group in the steel processing sector, with an annual output of 5.3 million tons. One of their 50 manufacturing plants is located at their headquarters in Mantova, Italy, where Euro Mec realized a water treatment plant specifically for the treatment of water used in conjunction with industrial brushes.

The waste water coming off these industrial brushes is full of brush fibres and very fine solid particles which must be removed before the water can be recycled in the washing process. A chemical-physical treatment cycle was adopted for the purification of such water. Clarification requires the help of substances able to form flakes that then easily precipitate and drag down the contaminating substances thus leaving behind clear water.

The waste water treatment plant includes the following stages: fine screening, coagulation, flocculation, clarification with tubular conduit packs, treated water and pumping to return the treated water to the industrial brushes in operation, reuse of the water in other processes and sludge recirculation.

The clarified water is treated and reused in conjunction with the same industrial brushes in the proportion of: 210 $m^3$/hour of recycled and 20 $m^3$/hr reintegrated into the water treatment plant itself.

*The photos show delivery pipes between the steel works and the water purification plant (top) clarification and accumulation tanks and pump station (left and right).*




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