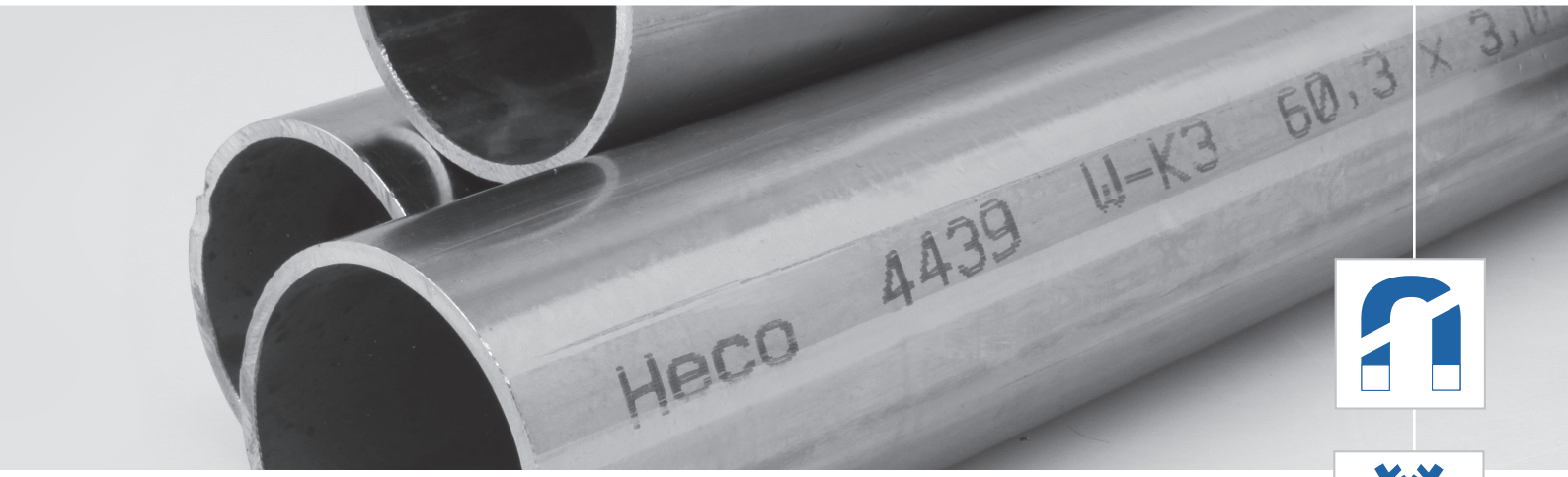
Stainless, austenitic chromium-nickel-molybdenum steel — 1.4439

C ≤ 0,03 / Cr 16,5 – 18,5 / Ni 12,5 – 14,5 / Mo 4,0 – 5,0
1.4439 / X2 CrNiMoN 17-13-5 / DIN EN 10088 / DIN 17440
AISI (317 LMN)*



- 50 °C

up to 500 °C

Applications

Medicine and pharmaceutics; petrochemical industry; chemical industry; transportation/ automotive engeneering.

Processing techniques

Machining; open-die and drop forging; cold forming/cold upsetting.

Corrosion resistance ●●●●○

Compared to material 1.4301, material 1.4439 is characterised by its properties in numerous acids (sulphuric, phosphoric and organic acids) and in media with a moderate chloride content, depending on the temperature and concentration 1.4439 is known to be urea grade.

Mechanical properties ●●●○○

Optimal processing properties are achieved by means of heat treatment in the temperature range of between 1040 and 1120 °C followed by rapid cooling in air or water. Owing to the increased nitrogen content, 1.4439 exhibits higher elastic limits than 1.4435, which can be advantageous for pressure-bearing components.

Forging ●●●○○

Heating to 1150 °C without special precautions. Hot forming at 1150 to 950 °C. Cooling in air or water if distortion does not appear feasible.

Welding ●●●●●

Material 1.4439 can be welded without difficulty.

Machining ●●○○○

Material 1.4439 shows a tendency towards work-hardening during processing.

Note

1.4439 can be weakly magnetic. The magnetizability can increase as the cold forming increases. The material can be polished.

heco
www.heco.de

* See "international coparison of materials"