

## Classifications

EN ISO 14172	AWS A5.11	Material-No.
E Ni 6117 (NiCr22Co12Mo)	ENiCrCoMo-1 (mod.)	2.4628

## Characteristics and field of use

UTP 6170 Co is suitable for joining high-temperature and similar nickel-base alloys, heat resistant austenitic and cast alloys, such as 2.4663 (NiCr23Co12Mo), 2.4851 (NiCr23Fe), 1.4876 (X10 NiCrAlTi 32 21), 1.4859 (GX10 NiCrSiNb 32 20). The weld metal is resistant to hot-cracking and is used for service temperatures up to 1100° C. Scale-resistance up to 1100° C in oxidizing and carburized atmospheres, e. g. gasturbines, ethylene production plants.

UTP 6170 Co can be welded in all positions except vertical-down. It has a stable arc. The seam is finely rippled and notch-free. Easy slag removal.

Preheating temperature should be adjusted to the base material. Post weld heat treatments can be applied independently of the weld metal.

## Typical analysis in %

C	Si	Mn	Cr	Mo	Ni	Co	Al	Ti	Fe
0,06	0,7	0,1	21,0	9,0	balance	11,0	0,7	0,3	1,0

## Mechanical properties of the weld metal

Yield strength $R_{P0,2}$	Tensile strength $R_m$	Elongation A	Impact strength $K_v$
MPa	MPa	%	J
> 450	> 700	> 35	> 80

## Welding instruction

Hold stick electrode as vertically as possible, keep a short arc. Use string bead technique. Fill end crater carefully. Interpass temperature max. 150° C. Redry stick electrodes for 2 – 3 h / 250 – 300° C.

## Welding positions



## Approvals

TÜV (No. 04661)

## Recommended welding parameters

Electrodes $\varnothing \times L$ [mm]	2,5 x 250	3,2 x 300	4,0 x 350
Amperage [A]	55 – 75	70 – 90	90 – 110