

## Classifications

AWS A5.11 / SFA-5.11	Material-No.	EN ISO 14172
ENiCrCoMo-1 (mod.)	2.4628	E Ni 6117 (NiCr22Co12Mo)

## Characteristics and typical fields of application

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. gas turbines, 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

	C	Si	Mn	Cr	Ni	Mo	Co	Ti	Fe	Al
wt.-%	0.06	0.7	0.1	21.0	bal.	9.0	11.0	0.3	1.0	0.7

## Mechanical properties of all-weld metal - typical values (min. values)

Yield strength $R_{p0.2}$	Tensile strength $R_m$	Elongation A ( $L_0=5d_0$ )	Impact energy ISO-V KV J
MPa	MPa	%	
>450	>700	>35	>80

## Operating data

	Polarity	DC +	Dimension mm	Current A
	Redrying	250 – 300°C / 2 - 3 h	2.5 × 250	55 – 75
			3.2 × 300	70 – 90
			4.0 × 350	90 – 110

Hold stick electrode as vertically as possible, keep a short arc. Use string bead technique. Fill end crater carefully. Interpass temperature max. 150° C.

## Approvals

TÜV (Nr. 04661)