Teknisk data for drawn arc stud welding

Stud material
We guarantee mechanical properties according to DIN 257, sheet 3, property class 4.8 for all threaded studs, unthreaded studs and similar studs of our standard range.
Tensile strength : min. 400 N/mm2
Yield strength : min. 320 N/mm2
Elongation : min. 14%.

We guarantee the following mechanical properties for concrete anchors and shear connectors:
Tensile strength : 450-600 N/mm2
Yield strength : min. 350 N/mm2
Elongation : min. 15%.

Stainless steels
All stainless steel studs are made from material No.1.4301 or 1.4303. Guaranteed mechanical properties:
Tensile strength : min. 500 N/mm2
Yield strength : min. 185 N/mm2
Elongation : min. 40%.
Refractory DABOTEK studs are made from the following materials: Material No.1.4713,1.4742,1 .4782,1.4828, 1.4841. These materials are always in stock. Refer to the special sheets concerning "Data concerning steel for application in the heat resisting industry".

Stud dimensions
The stud dimensions can be found in the following dimension sheets. The dimension "l1" is the stud length "after welding", i.e. the studs delivered by us are 1 -5mm longer than the specified purchase size, depending on the diameter of the stud (welding over dimensions).

The threads of DABOTEK stud are cold rolled. The threaded studs are manufactured with thread tolerances according to ISO DIN 13, sheet 34. Special threads available on request.

Coating the welding tip "Metallizing"
All DABOTEK studs are provided with a metal coating at the welding tip which enables easy welding, stabilization of the welding arc and desoxidation of the welding pool. The quality and correct proportioning of the "Metallizing" are essential factors for obtaining perfect and uniform weldings.

Surface protection
If required, the following surface protection is available:
a) zinc-plated
b) zinc-plated and yellow chrome-plated
c) copper-plated
d) nickel-plated on copper-plated base e) cadmium-plated.
In case of zinc and cadmium plating, the plating is removed at the welding tip, to prevent contamination of the welding pool.

Ordering specifications
Use the type no. Or the following specifications are required when ordering :
a) type of studs
b) stud diameter "d"
c) stud length "l1"
d) material
e) surface protection.

Our standard range comprises the following types of studs:

Type D : fully threaded studs

Type P : partially threaded stud,
thread length according to DIN 32500 or thread length according to requirements.

Type R : threaded stud with reduced minor thread diameter at th welding tip. Refer to the table for the reduction in length and diameter. Consequently the diameter of the weld fillet corresponds approximately to the nominal diameter of the stud thread.

Type S : unthreaded stud.

Ceramic ferrules
Each type of stud requires its own particular ceramic ferrule. For welding reasons, DABOTEK studs always include ferrules. Ferrules are not available without the studs.

Weld fillet
During the welding process, a welding fillet is formed around the stud at the transfer from the stud to the base metal, the dimensions of which are predetermined by the type of ferrule. The fillet diameter "d3" is usually greater than the nominal diameter of the stud.

The ceramic ferrule concentrates the welding arc, excludes the atmosphere and forms a weld fillet around the stud base.

We reserve the right to technical change