

TECHNICAL NOTE

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From	BU Anchors (AEP)
For information	HUBs, MOs

Technical statement: Welding on fastening sets with HIT-RE 500 V4

Welding operations nearby fastenings with HIT-RE 500 V4 mortar is possible without affecting the loading capacity of fixing points. Based on our experience the hardened mortar is resistant to short-term temperature occurring during the welding process. Due to the thermal conductivity of the fastener (metal) and the base material (concrete) no negative effects on HIT-RE500 V4 are to be expected.

The temperature effects on the mortar are not critical as the heat is dissipated by the base material. Higher temperatures will appear near the welding point only. So, only a small mortar-depth is affected. The fixing point won't be damaged significantly.

However, it is important to note that the anchor must not be loaded during the welding process to avoid possible weakening of the resin matrix and a reduction in cohesion.

Due to the variety of welding methods and conditions, we cannot assess the suitability of welding for specific applications. So, welding nearby fastening sets with HIT-RE 500 V4 is always in responsibility of the customer!

When welding operations on fastener sets with HIT-RE 500 V4 mortar, it is always important to consider the following:

1. Welding operations must not be carried out on loaded anchors
2. Chemical anchor products are based on organic binders/resins that are damaged or destroyed at very high temperatures
3. Heat input during welding and heat dissipation to and from the fixing point within the steel and base material must be considered
4. Heat input depends on how the welding is carried out and which welding system is used (e.g. electric welding generates less heat than acetylene welding)
5. Uncured mortar is particularly susceptible to heat input. Welding near uncured resin will most likely destroy the resin and lead to failure of anchor
6. Welding near an injection anchor may damage the mortar in the annular gap close to the concrete surface, resulting in a possible reduction in shear load performance
7. Anchors should never be loaded as long as the temperature of the surrounding base material is elevated
8. Welding directly onto Anchor components is not recommended, as the weldability cannot be guaranteed and the structure of the steel can be permanently altered

Revisions:

V.0 01.10.2024 Initial version

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