

What is the Safety of Hollow Bar?

(Hollow Bar anchor, soil nail, micropile)

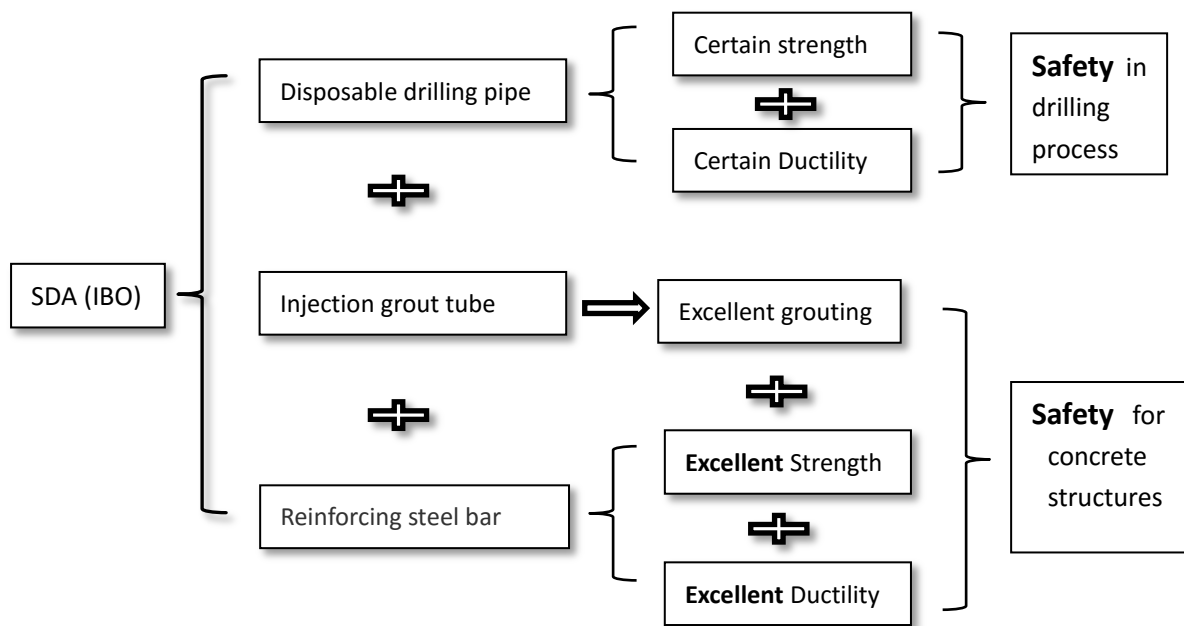
Many manufacturers declare that their hollow bars are safe products.
But do they really understand the safety means?

Hollow bar anchors have two conflicting **basic attributes**.

Strength, it is a direct design parameter, and each manufacturer provides the strength index of the hollow bar.

Ductility, it is not a direct design parameter. Only few of manufacturers provide the clear Ductility index. But it's very important since it relates to safe reliability.

Safe Hollow bars must have the **excellent** properties of both aspects concurrently.



Note: SDA = Self Drilling Anchors, i.e. Hollow Bar Anchors, or Hollow Bar Soil Nails, Micropiles.

So, no matter in drilling installations or reinforcing works, the strength and ductility should be balanced.

However, most attentions focus on the easy and quick installations of hollow bar anchors, but the safety performance is often ignored. Therefore the ductility index is rarely mentioned in purchasing.

Obviously this is wrong. In fact, the Ductility index is required for all kinds of metal materials in construction, and hollow bar should not be excluded.

Fortunately, there are existing European Union (EU) and USA **standards** for micropiles and soil nails (e.g. **EN14490, EN14199, and ASTM A615**). And some international brands (such as TITAN, MAI, DSI, SHS) have already begun to provide complete parameters of hollow bar anchors.

ONTON concentrates on manufacturing safe hollow bars (excellent property both in strength and ductility).

