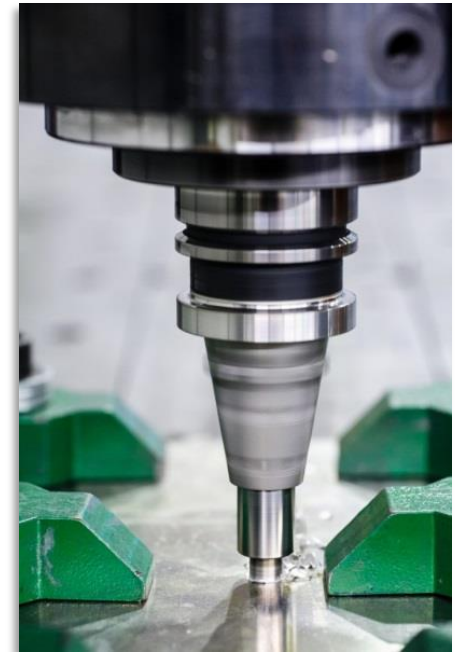


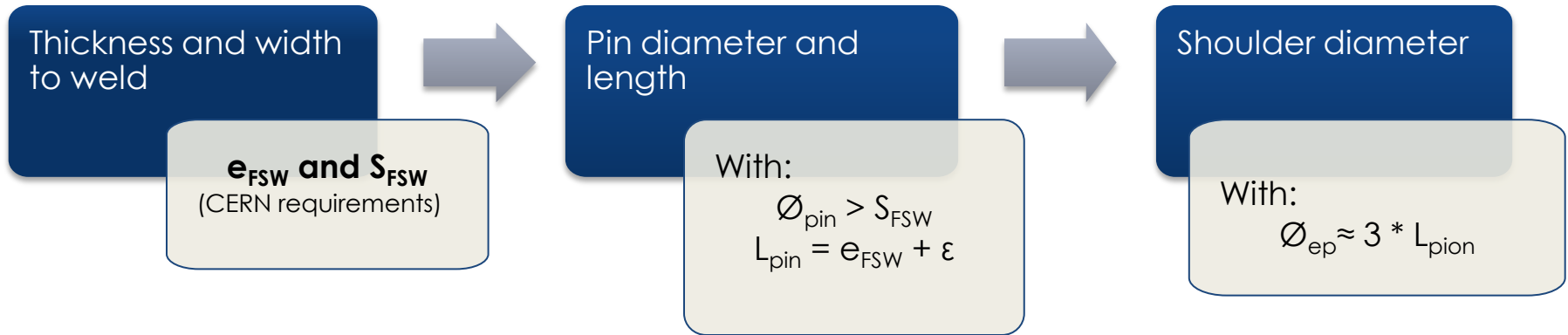


Recommandations for FSW of Al/Stainless Steel assembly

Amarilys BEN ATTAR

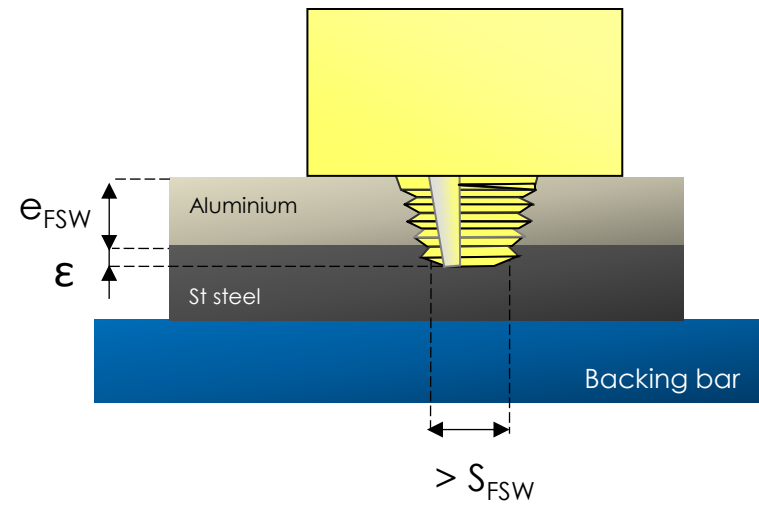


■ Geometry:



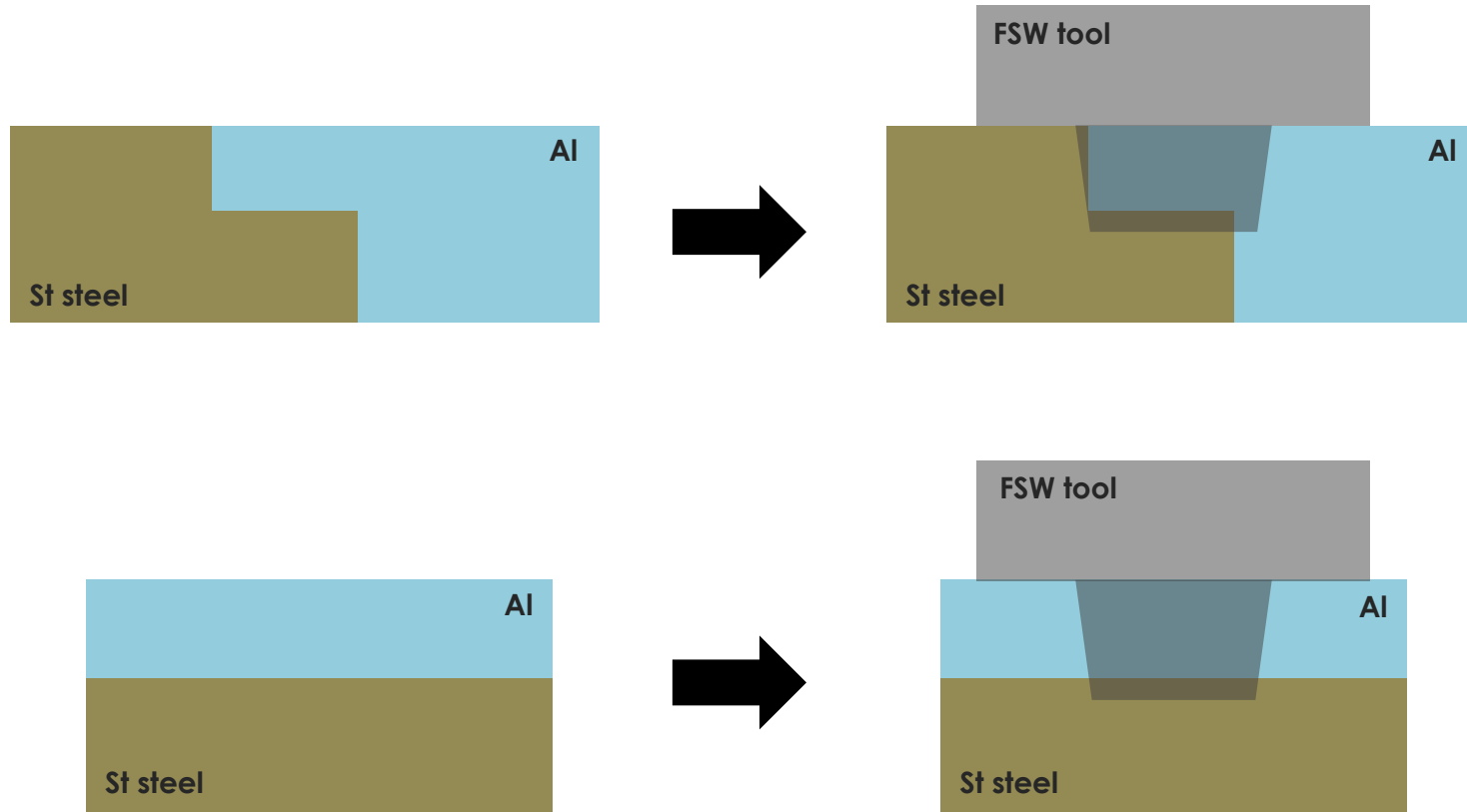
■ Material:

- St steel lay to significant wear of the welding tool
- Material has to be chosen in consequence (Tungsten carbide for ex)



Welding configurations

- Institut de Soudure suggestion for Al/St steel configuration:



■ Main issue involves:

- Welding tool wear: use of tungsten carbide tool
- Difficulties to stir two materials non miscible
- Need to manage the intermetallic layers

■ Mechanical properties

80 MPa for 316L/5083 in shearing test

■ Tool length impact:

