

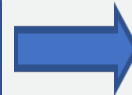
## PSB22 - Premium ESR Tool Steel

**Electro Slag Remelt (ESR) refines tool steel composition.**

Conventional production



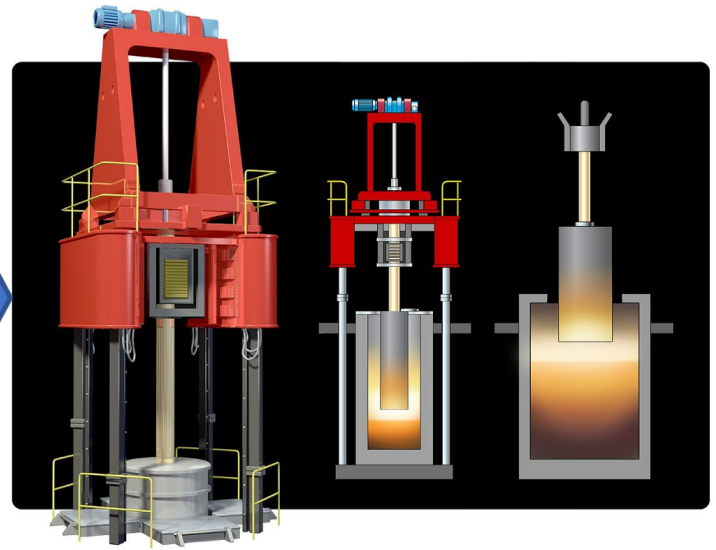
Remelting process removes sulfide and inclusions.



Resulting in high quality ingots



Ladle refining during conventional steel making process



Electro Slag Remelting process

**ESR is a lower cost alternative to Vacuum Arc Remelting (VAR)**

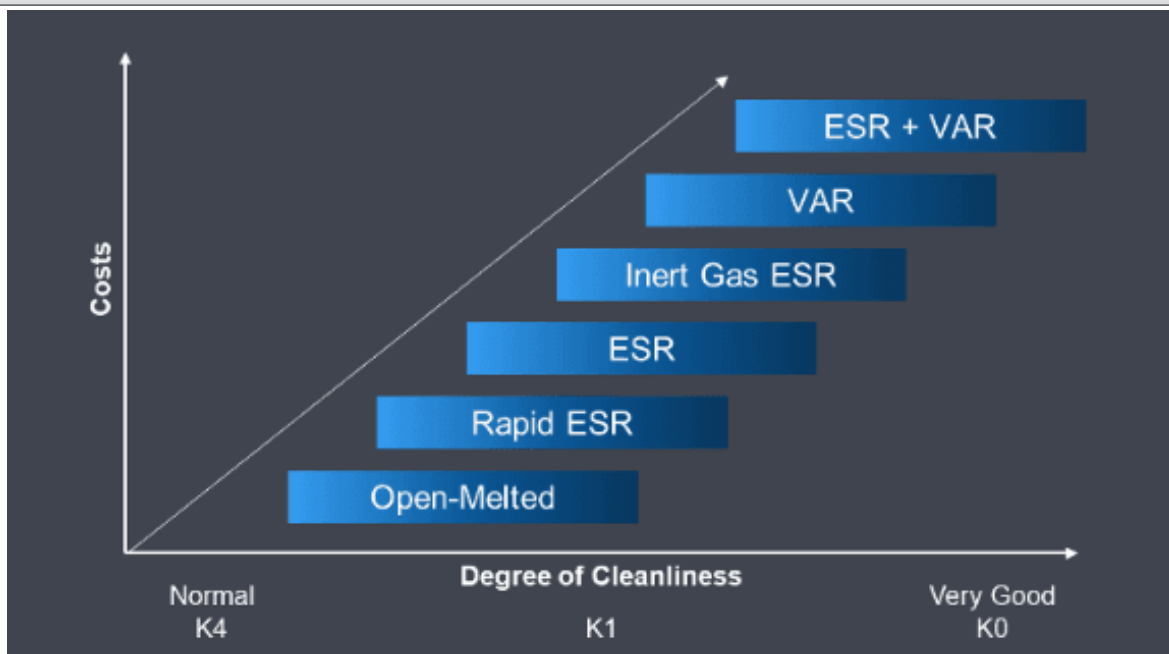
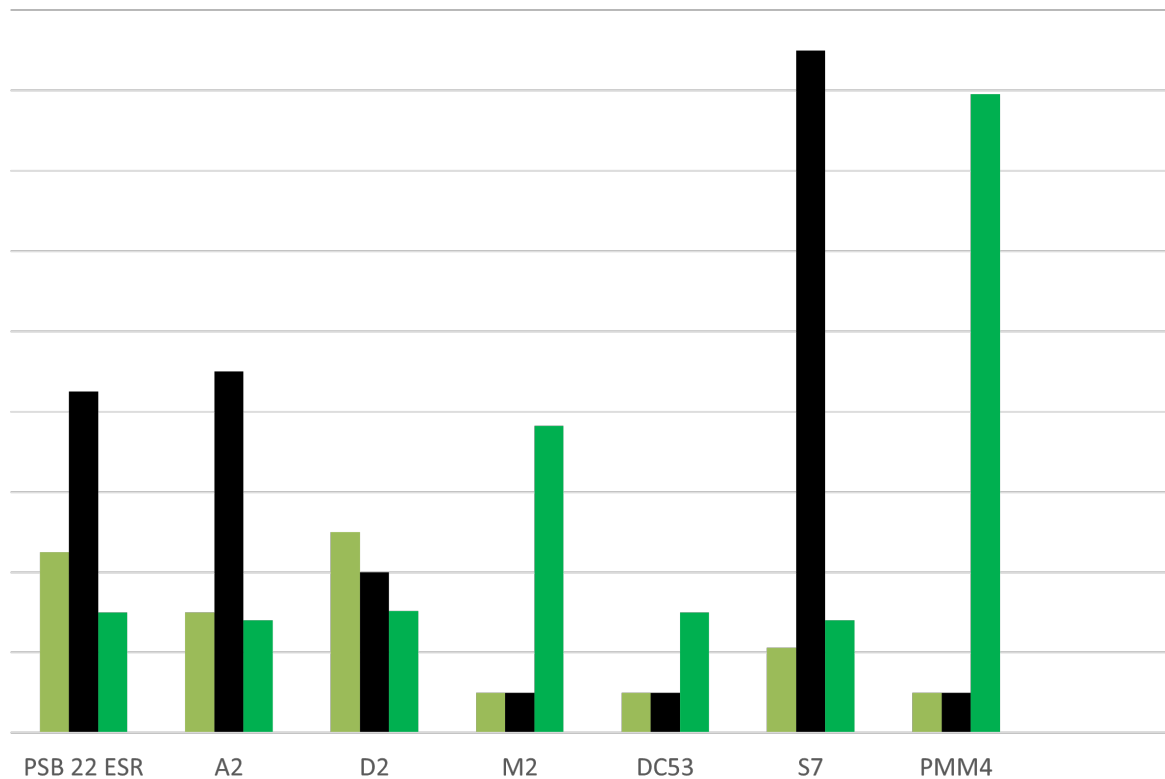


Chart source: Matmatch.com

## PSB22 - Premium ESR Tool Steel

Total Tooling Cost .....Find your balance

■ Wear Resistance ■ Toughness ■ Cost



PSB22 ESR should be considered for the following applications.

Application to consider PSB22 ESR	Replaces	Reason to consider replacing
Thread rolling and header tooling, form roll knurls and knurling tool holders, rolling dies, extrusion dies, automotive stamping dies.	A2 and D2	Extended wear at a good price. Higher tempering temp allows coatings that require high temp.
	M2	Lower cost
	PMM4	Lower cost and more availability.
Punches and dies.	DC53	To get ESR quality, more availability, lower cost..
Tire Shredders and shredding equipment.	D2, A2	Longer tooling life.
Thread and Form rolls.		
Slitter knives		

Flats:	0.082" thru 0.265" Thick	Hardness Range:	T
Rounds:	0.75" thru 12" Diameter	Heat Treat:	Sames as D2