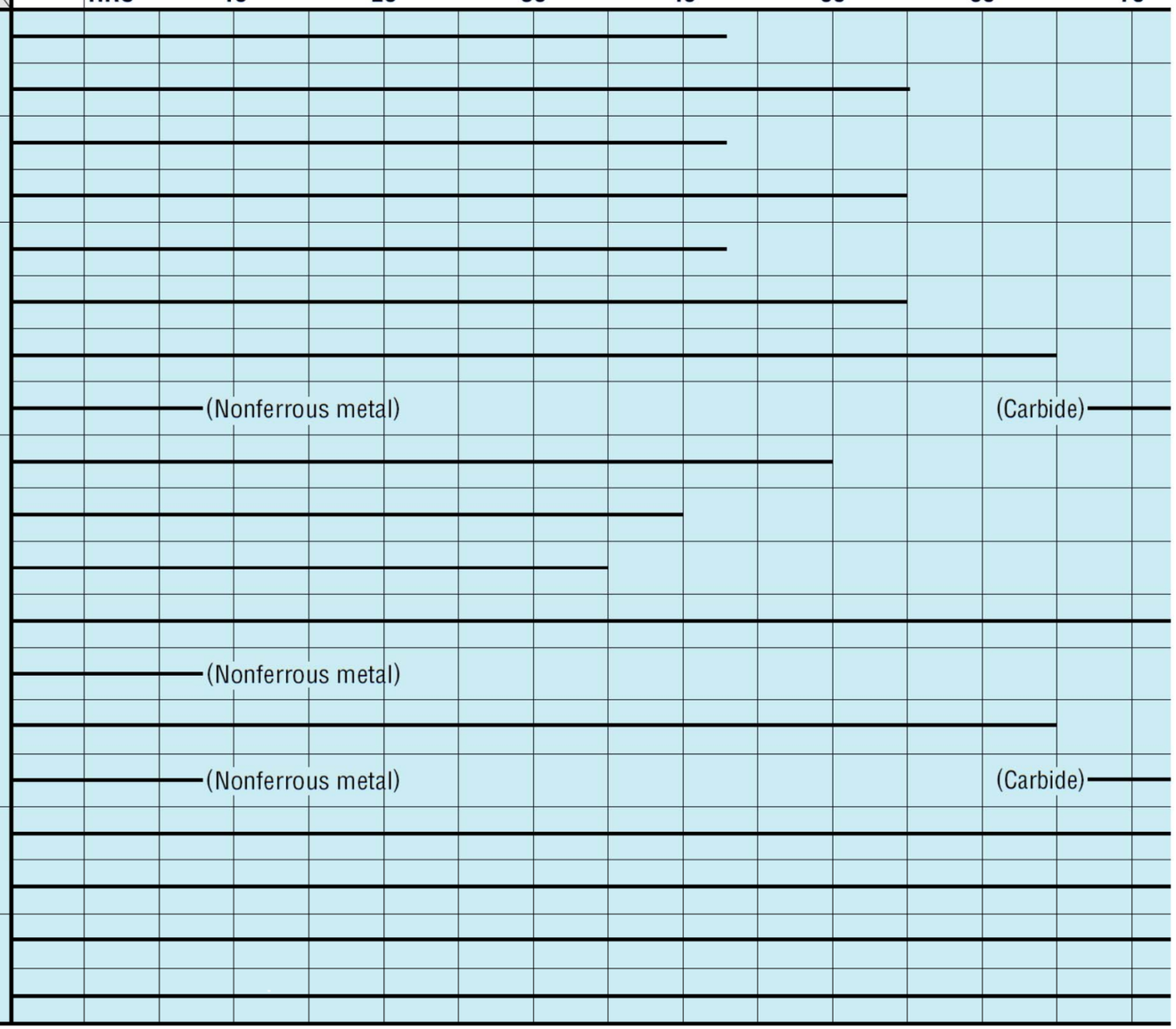
HARDNESS OF MATERIAL AND CORRESPONDING TOOLS

Processing method		Equipment	Required tools
Cutting	Boring on flanks and bottom	General purpose milling cutter NC milling cutter Machining center	Drills Reamers End mills Cutting tools
	Boring	Drilling machine Drill press Boring machine Jig borer	Drills Taps Reamers Cutting tools
	Machining cylinder	General purpose lathe NC lathe Turning center	Drills Reamers Taps Cutting tools
Grinding		Surface grinder Cylindrical grinder Jig grinder Profile grinder Forming grinder	Magnets grindstone
Electroerosion		E D M	Electrode master
		W E D M	Wire

Materials	Tool materials	
Drills	High-speed steel	SKH—
Reamers	Carbide	Wn—Co
Taps	High-speed steel	SKH—
	Carbide	Wn—Co
End mills	High-speed steel	SKH—
	Carbide	Wn—Co
Cutting tools	Boron	CBN
	Diamond	D
Magnets grindstone	White fused alumina	WA
	Brown fused alumina	A
	Pink fused alumina	PA
	Green silicon carbide	GC
	Black silicon carbide	C
	Electrodeposited boron	CBN
	Electrodeposited diamond	D
Electrode master	Electrolytic copper, Brass	CU—
	Copper tungsten, Silver tungsten	—Wn
Wire	Brass	CU—Zn
	Tungsten	Wn

Tools materials \ Parts materials	Machined materials: Nonferrous metal	Untreated	Hardened materials	Quenched/Tempered
For press die	(Al)	(Al—alloi) SS400(SS41) SKD11 S45C S50C DC53	(Be—Cu) SCM435 HPM2T	DC53 (Carbide) SKD11 S45C SKS3 SUJ2 SKH51
For plastic mold	CU BsBM2	SKD61 STAVAX ESR RIGOR (SKD12group)	HPM7 NAK55 PX5 HPM1 NAK80 HPM38 HPM50 S—STAR FDAC STAVAX ESR DH2F	(Electroforming/outside) (Electroforming/inside) ORAVAR SUPREME (Ade-hardened) MAS1C HPM38 S—STAR SKD61 STAVAX ESR RIGOR (SKD12group)