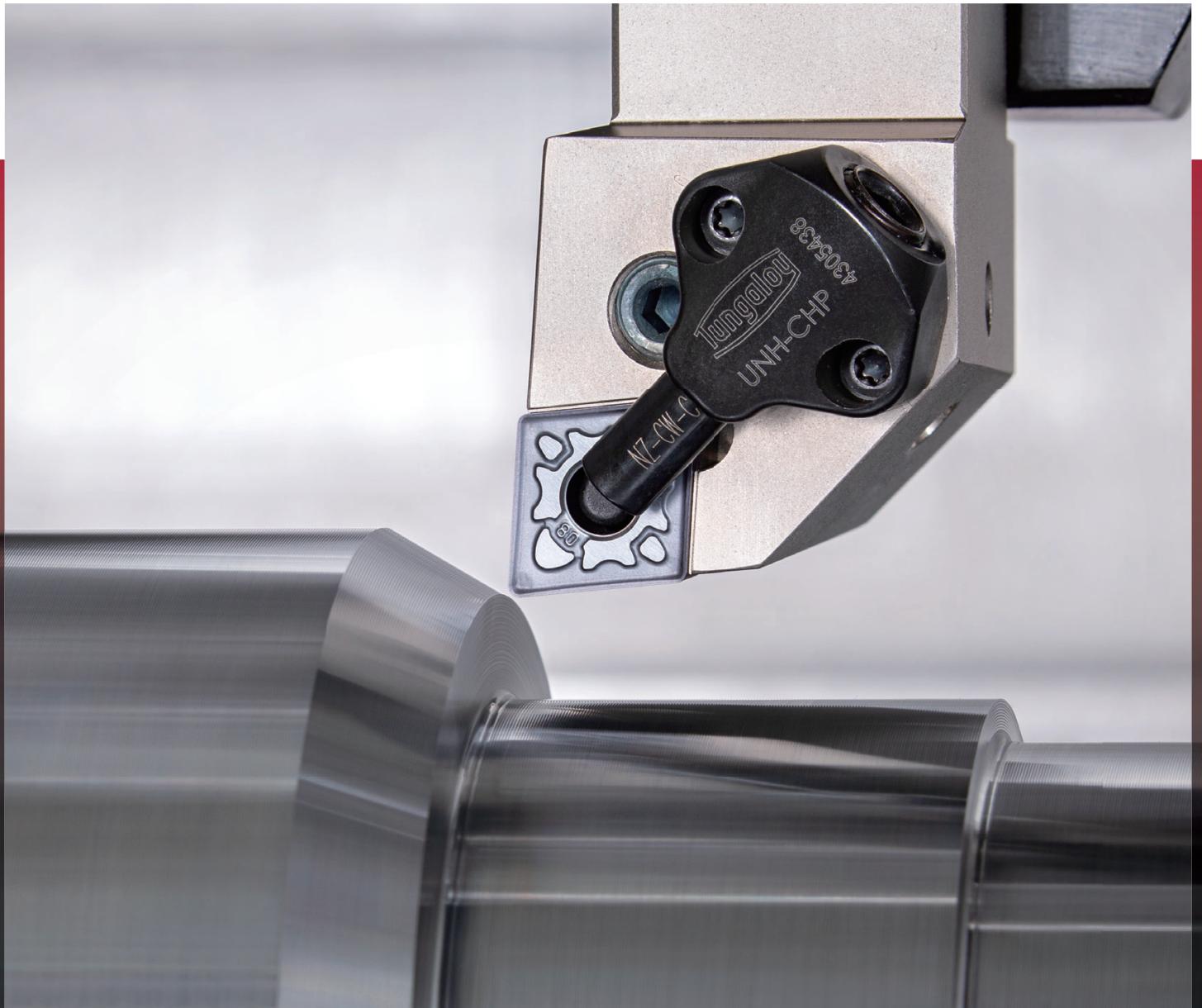


Grades for heat-resistance alloy

AH8000 SERIES

Tungaloy Report No. 437S1-G

Introducing **SDM chipbreaker** with AH8000 grade series for turning HRSA materials with **superior notch wear resistance**



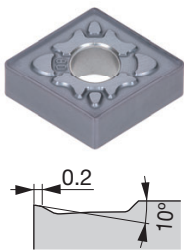


New SDM chipbreaker combined with AH8000 series for minimizing notch wear and crater wear

New

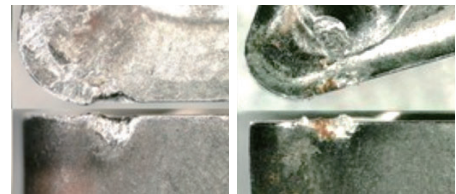
SDM chipbreaker

Light cutting geometry for notch wear and crater wear resistance



SDM chipbreaker features a unique cutting edge design: a combination of T-land with variable widths and large rake angle minimizes wear mode progression typical in heat-resistant super alloy applications. SDM is especially effective to prevent notch wear development, as shown on the right, that ends tool life.

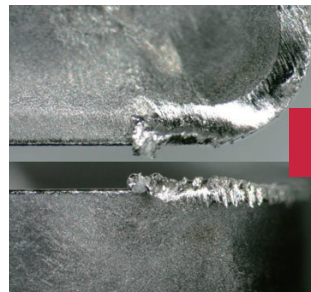
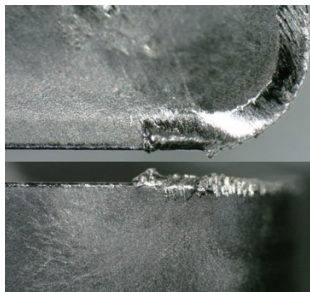
Typical notch wear modes



Early stage in machining

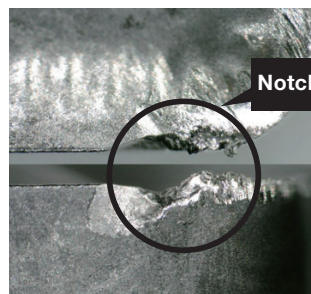
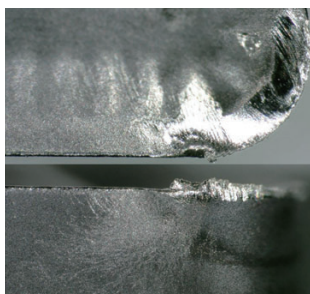
Middle stage in machining

SDM chipbreaker



Process security!
Longer tool life!

Conventional chipbreaker



Notch wear - end of tool life

S Workpiece material: Inconel 718
Cutting speed : $V_c = 30$ m/min
Feed : $f = 0.2$ mm/rev
Depth of cut : $a_p = 1$ mm
Machining : External continuous cutting
Coolant : Wet

STANDARD CUTTING CONDITIONS

ISO	Chipbreaker	Corner radius	Depth of cut	Feed	Cutting speed: Vc (m/min)	
		RE	ap (mm)	f (mm/rev)	AH8005	AH8015
S	HRF	0.4	0.2 - 1.5	0.05 - 0.23	40 - 100	20 - 80
		0.8	0.2 - 1.5	0.05 - 0.25	40 - 100	20 - 80
		1.2	0.2 - 1.5	0.07 - 0.27	40 - 100	20 - 80
	HRM	0.4	0.5 - 4	0.05 - 0.3	40 - 100	20 - 80
		0.8	0.5 - 4	0.07 - 0.33	40 - 100	20 - 80
		1.2	0.5 - 4	0.1 - 0.35	40 - 100	20 - 80
		1.6	0.5 - 4	0.15 - 0.4	40 - 100	20 - 80
	SDM	0.4	1 - 4	0.2 - 0.3	40 - 100	20 - 80
		0.8	1 - 4	0.2 - 0.5	40 - 100	20 - 80
		1.2	1 - 4	0.2 - 0.5	40 - 100	20 - 80



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