

Petrochemical and Power  
Generation Industries  
seriously affected



### METAL DUSTING CORROSION

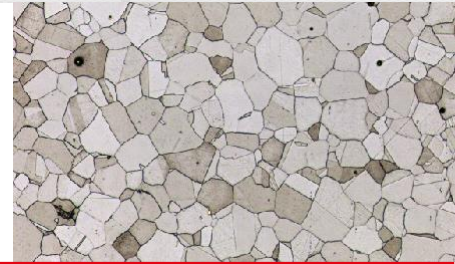
- Potentially carburizing and reducing atmospheres
- Temperature range: usually 450 °C to 800 °C
- Formation of pits or general attack



### VDM® ALLOY 699 XA

- Highly metal dusting resistant
- Workability comparable to VDM® Alloy 601
- Creep resistance at least like VDM® Alloy 601
- Good weldability under Argon

DIN / UNS Number: 2.4842 / N06699  
Short Name: NiCr 30 Al



### CHEMICAL COMPOSITION

	Ni	Cr	Al	Fe	Mn	Si	Ti	Nb	Cu	Zr	C	N	P	S	B
Min.		26.0	1.9								0.005				
Max.	bal	30.0	3.0	2.5	0.50	0.50	0.60	0.50	0.50	0.10	0.10	0.05	0.02	0.01	0.008

### MECHANICAL PROPERTIES

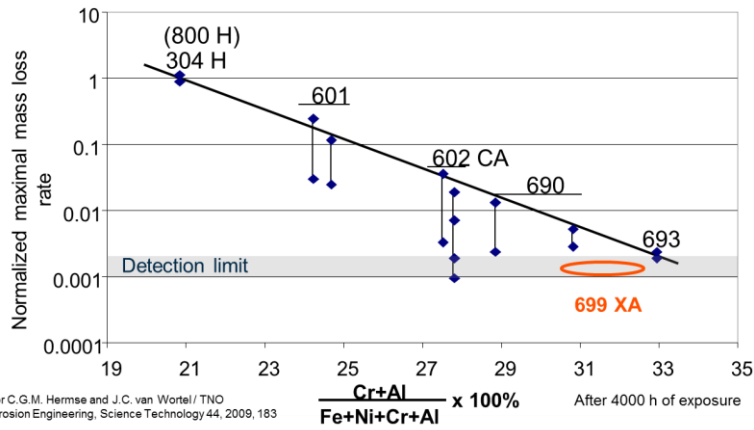
Preliminary values

T in °C	20°C
KV <sub>2</sub> in J	≥ 70

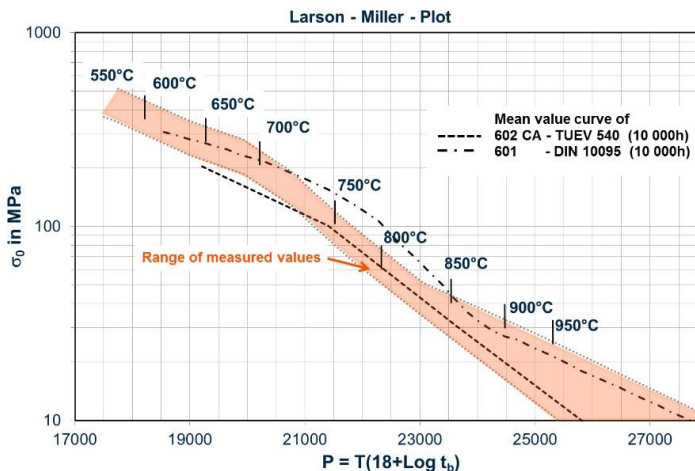
T in °C	20	100	200	300	400	500	600	700
R <sub>p0.2</sub> in MPa	240	210	180	160	150	143	137	120
R <sub>m</sub> in MPa	610							
A in %	40							

### METAL DUSTING RESISTANCE

37% CO, 9% H<sub>2</sub>O, 7% CO<sub>2</sub>, 46% H<sub>2</sub>, a<sub>c</sub>=163, p(O<sub>2</sub>)= 2.5\*10<sup>-27</sup> bar at 600°C, 20 bar



### CREEP RESISTANCE



### PRODUCT FORMS



TUBE



PLATE



ROD & BAR



WIRE



FILLER METAL

ASME AND TUEV  
APPROVALS IN PROGRESS