

### Manufacturing

TiAl 48-2-2 Ingots are manufactured by double or triple VAR melting with consumable electrodes. Consumable electrodes are made up of compacted Ti sponge, Aluminium and master alloys.

### Applications

TiAl 48-2-2 Ingots are mainly used as feed stock materials for further VAR based casting processes to  $\gamma$ -TiAl components.

### Chemical Composition

Ti -33Al -2.6Cr -4.8Nb (wt.-%)

Al: 32.4 – 33.6 wt.-%

Cr: 2.4 – 2.8 wt.-%

Nb: 4.5 – 5.1 wt.-%

Impurities (wt.-ppm)

H	N	O	C	Fe	Ni
< 50	< 200	< 800	< 200	< 1000	< 500

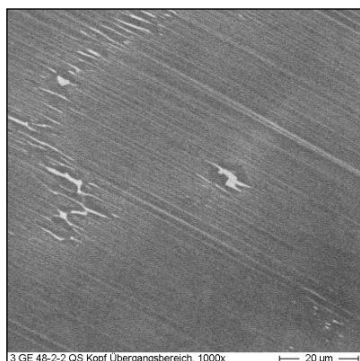
### Forms of Delivery

Cylindrical ingots of 180 mm – 280 mm diameter, 500 mm to 1.200 mm length.

Surface conditions as-cast or mechanically machined.

Other sizes and individual customer specifications on request.

Ingots contain casting porosity. Subsequent HIP processing for closing casting porosity on request.



### Physical Properties

Density: 3.97 g/cm<sup>3</sup>

Hardness: 285 HV10

Youngs Modulus (RT): 160 GPa

(600 °C): 125 GPa

0,2 Yield Strength (RT): 430 MPa

(600 °C): 320 MPa

Microstructure consists of:

- extended  $\alpha_2/\gamma$  lamellar colonies
- small amounts of
  - $\gamma$ -grains
  - $\alpha_2$ -grains
  - $\beta_0$ -grains

$T_{melt}$ : approx. 1510 °C

#### AMG TITANIUM ALLOYS & COATINGS

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