

# MATERIAL FOR EUROPEAN XFEL RESONATORS

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## *Abstract*

Twelve different types of semi-finished products will be provided by DESY to producers of European XFEL superconducting resonators. Work on material for XFEL cavities is divided into three phases (prototyping, pre-series and series production). Two new companies (Ningxia OTIC and Plansee Metal GmbH) have been qualified as XFEL suppliers. Material is contracted to 4 companies (Ningxia OTIC, Plansee Metal GmbH, Tokyo Denkai and W.C. Heraeus). Procurement of semi-finished products includes: acceptance on producer's site, eddy current scanning of the sheets, testing for required parameters (RRR, interstitial impurity analysis, metallic impurities analysis, metallography, tensile test, hardness HV, dimensional check, surface roughness), documentation using the DESY EDM-System, marking, delivery to companies. Semi-finished products for pressure bearing sub-components of cavities have to be fabricated according Pressure Equipment Directive 97/23/EC. Qualification of material and the certification of the material producers were done by a "notified body". Appropriate infrastructure and logistic for guiding through more than 20.000 of semi-finished products has been build up.

**CONTRIBUTION NOT  
RECEIVED**