

THERMOELECTRIC MATERIALS FROM RUSTEC LLC

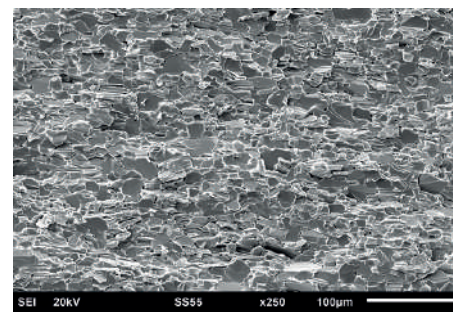
The teams of RusTec and affiliated company TB Nord have more than 30 years of experience in fabrication of thermoelectric (TE) materials. It was started in 1991 from company SCTB Nord (which named as FerroTec Nord from 2012). One of the main achievements made within this time was development (1997 year) of technology for production extruded TE materials.

RusTec specializes in the production of materials based on the chalcogenide group of $\text{Bi}_2\text{Te}_3\text{-Sb}_2\text{Te}_3$ and $\text{Bi}_2\text{Te}_3\text{-Bi}_2\text{Se}_3$ solid solutions, in the form of ingots the highest quality, for thermoelectric energy converters (cooling and generator modules) based on Peltier and Seebeck effects.



Besides excellent mechanical properties extruded material allows to fabricate modules with efficiency Z higher 2.8 (0.001/K) on open air (25 °C). It is worth to say that without this technology we could not see modules for TELECOM and LIDAR. Only mechanical strength of extruded materials can provide fabrication of dices with low dimensions like 0.2 mm.

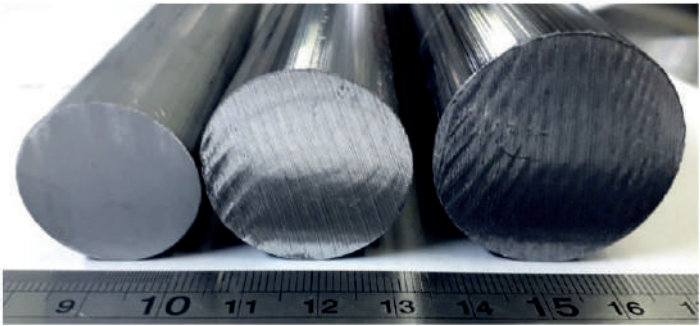
- ✓ Our product is a good combination of price and quality.
- ✓ Our product is unique in that it is constantly being improved, thanks to the feedback we receive from our customers.
- ✓ All products undergo production quality control and are certified for compliance with the fundamental standards.
- ✓ RoHS compliant.
- ✓ We build cooperation with each customer on an individual basis: we select the material for the goals and objectives of a particular customer, discuss the terms of delivery and payment



THERMOELECTRIC MATERIALS AND TECHNOLOGIES

TECHNICAL PARAMETERS OF EXTRUDED INGOTS IS AS FOLLOWS:

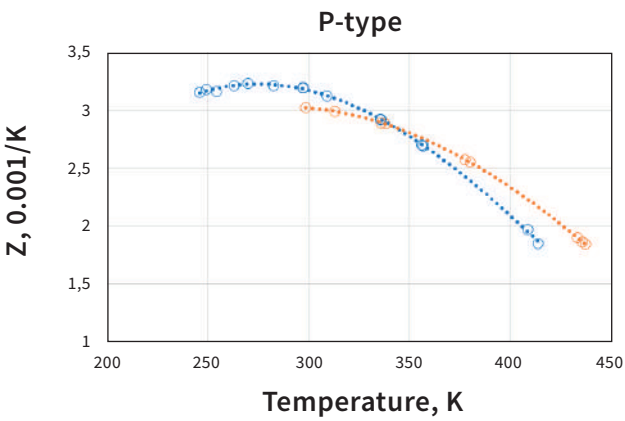
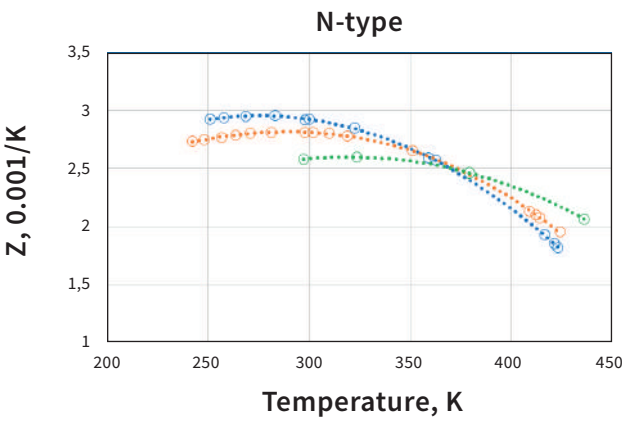
- ✓ Length: 120 mm, 240 mm
- ✓ Diameter: 25 mm, 30 mm, 35mm.
- ✓ Electrical conductivity:
870-1540 Ohm⁻¹cm⁻¹
- ✓ RusTec LLC is certified by ISO 9001:2015



MECHANICAL PROPERTIES OF EXTRUDED INGOTS

	P-type	N-type
Compressive Strength, MPa	170	210
Shear Strength, MPa	15.7	20.9
Bending Strength, MPa	48.1	75.5
Young`s Modules, GPa	47.0	43.0
Poisson`s Ratio	0.31	0.31
Density, g/cm ³	6.71	7.73
Vickers hardness	56.2	60.5

THERMOELECTRIC PROPERTIES OF EXTRUDED INGOTS



We make your business more cool!

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