PtRh Thermocouple wires

Diameters

- **from 2,00 mm (0.079“) to 0,04 mm (0.002“)**
- **standard diameters 0,35 mm (0.014“), 0,50 mm (0.020“)**

Type	Branch composition		Temperature scope of application		Tolerance	
			Long-term	Short-term	IEC 584–2	ASTM E230/E230M
S	Pt Pt–10%Rh	(–) (+)	(0 ÷ 1300) °C (32 ÷ 2372) °F	0–1 600 °C (32 ÷ 2912) °F	Class 1 or 2	Standard or Special Tolerances
R	Pt Pt–13%Rh	(–) (+)	(0 - 1300) °C (32 ÷ 2372) °F	0–1 600 °C (32 ÷ 2912) °F	Class 1 or 2	Standard or Special Tolerances
B	Pt–6%Rh Pt–30%Rh	(–) (+)	(0 - 1600) °C (32 ÷ 2912) °F	(0 ÷ 1800) °C (32 ÷ 3272) °F	Class 2 or 3	Standard or Special Tolerances

SAFINA, a.s. offers thermocouples as individual thermocouple branches (wires) as well as welded couples of both branches. Additionally, thermocouples strung in protective ceramic tubes can be supplied on request.

The calibration laboratory for calibration of thermocouples uses two methods:

1. Fixed point method
2. Comparison method

Both methods are accredited by the CIA (Czech Institute for Accreditation) according to DIN EN ISO/ IEC 17025:2005.

All thermocouples supplied by SAFINA, a.s. are in compliance with the standard EN 60584–1 stemming from the international temperature range ITS–90 and comply with temperature limits defined in the IEC 584. Calibration certificate can be provided according to ASTM E230 standard for standard or special limits.

Quality assurance

SAFINA, a.s. enforces EN ISO 900+ and EN ISO 14001 certified standards and places an extraordinary emphasis on quality of its products. Our laboratories guarantee reliable control over quality of materials and precision and correctness of analytic results.

Depending on customers´ requirements we can apply many analytic methods including:

- XRF X-ray fluorescence analysis
- ICP-OES Inductively coupled plasma-optical emission spectrometry
- AAS Atomic absorption spectrometry of trace analysis
- Metallography Grain size determination
- Ultrasonic testing

Recycling

SAFINA, a.s. recycles waste material containing precious and non ferrous metals for its subsequent and full-fledged use. Maximum emphasis to minimized environmental impact is an important criteria in waste reprocessing. In the field of platinum products we offer our customers a large variety of recycling services ranging from recycling and purchase of used pure and alloy Pt products to precious metal scraps or chemical solutions from different industrial productions.

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PRECIOUS METALS PROCESSING AND RECYCLING
ZPRACOVÁNÍ A RECYKLACE DRAHÝCH KOVŮ

Pt PRODUCTS AND SERVICES

FOR GLASS INDUSTRY

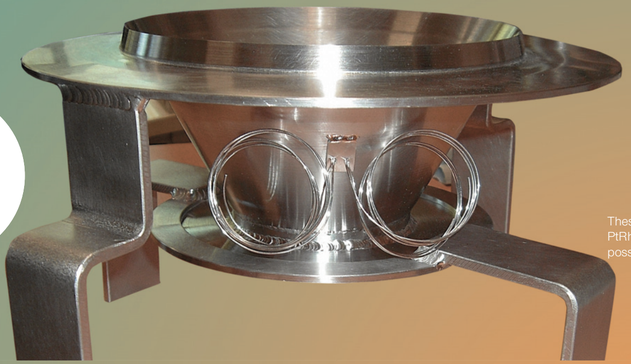
Pt PRODUCTS
AND SERVICES
for glass industry

SAFINA - Introduction

SAFINA, a.s. is a company with a comprehensive manufacturing program of processing and production of precious and non ferrous metal products including their recycling. SAFINA has a long-lasting tradition which dates back to 1860. Since 1992, SAFINA, a.s. has been a private company and has maintained its dominant position primarily on the European market. The company constantly focuses on the improvement of its existing manufacturing processes, as well as on the development of new production programs and technological advances.

Platinum products

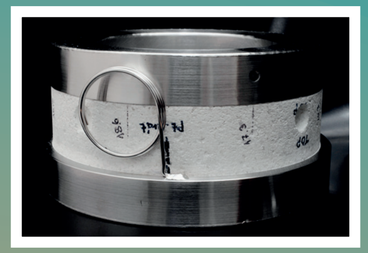
- Platinum program for glass industry
- Platinum coated ceramics
- Pt wires
- PtRh thermocouple wires
- Laboratory equipment

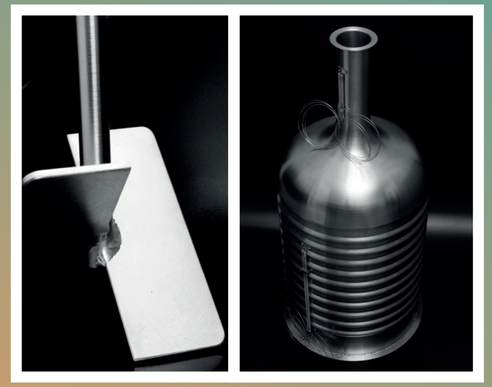


Platinum program for glass industry

Devices for homogenization and molding of glass

- **Homogenizers**
- **Outflow devices**
- **Bubbling jets**
- **Stirrers**
- **Thermowells**
- **Bushings**
- **Plungers, etc.**





These products are mostly produced to order according to customer provided requirements. The most commonly used materials are PtRh10 and PtRh20 alloys. SAFINA, a.s. provides comprehensive service to all delivered products at the company headquarters or, if possible, directly with the customer.

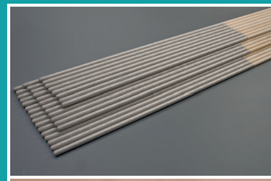
Platinum coated ceramics

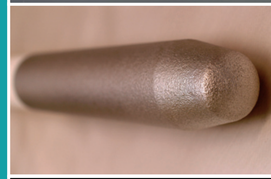
- **Thermowells**
- **Plungers**
- **Stirrers**
- **Parts of Feeder**
- **Outflow rings**

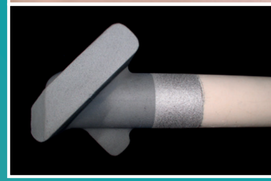
Applications

- **Glass industry**
- **Chemical industry**
- **Sensor industry – thermowells**

SAFINA, a.s. offers thermal sprayed platinum either as a package including ceramics based on approved drawings, or using ceramics that are provided by the customer. Coating thickness usually varies between 200 and 500 µm by purpose of use, or by customer requirement. Platinum layers produced by thermal spraying technology enable the protection and prolonged life of ceramic parts. By utilization of advanced platinum spraying technologies, significantly reduced operating costs can be achieved.







Pt wires

Manufactured wires are available in diameters ranging from 0.04 mm to 2.0 mm. Wire with square dimensions of 4 x 4 mm and 5 x 5 mm are also available.

Laboratory equipment

High quality labware and instruments made from Pt, Ir, Rh, Au, Ag and their alloys are indispensable implements in laboratories and plants in the chemical, metallurgical, glass and ceramic industry.
SAFINA can modify existing products or manufacture products to order according to the customer's wishes by mutual agreement and according to the technical documentation delivered by the customer.