

Major industry consumers



Mining industry



Glass fiber industry



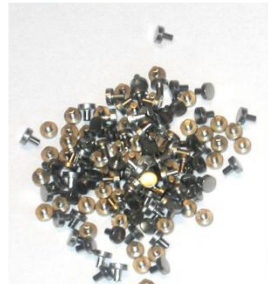
Jewelry production



Medicine



Nitrogen industry



Military Industrial complex



Finished products

Chemical compounds of precious metals



Traditionally the plant produces various chemical compounds of precious metals in form of crystallines or liquid form.

Application areas

As an active component in preparing of catalysts in chemical industry and as neutralizers for exhaust gases in car industry



Compounds of platinum, palladium, rhodium, gold, silver



Finished products

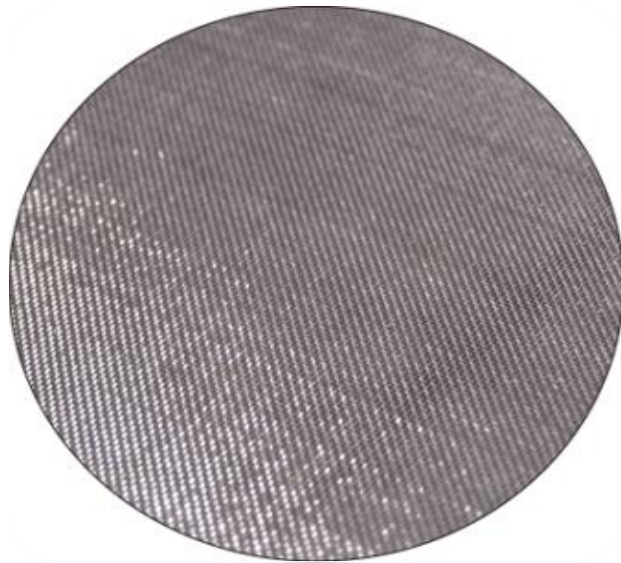
Labware



Application

- ❑ Chemical and analytical operations in fluoride and sulphate systems for resolution of oxides, fluorides, carbonates, phosphates, borides, several silicates and some other compounds.
- ❑ In opening process of samples of silicate rocks and minerals, minerals and ores of titanium, niobium, tantalum, zirconium, manganese, chrome and other minerals and many industrial materials.
- ❑ During evaporating and concentrating process of samples of natural waters, processing mediums, mineral acids and recrystallization of chemical reagents.
- ❑ In definition of organic and biological materials, soils and other ash contents.

Catalyst Gauzes Production



Applied in:

- nitric acid production
- hydroxylamine-sulphate production

JSC "Ekaterinburg Non-Ferrous Metals Processing Plant" has more than 60-year experience in producing gauzes made of precious metals and their alloys



Catalytic Systems



Modern catalytic system for ammonia oxidation in working units for production of nitric acid, hydrocyanic acid and hydroxylamine constitutes of the following gauzes combination:

catalyst gauzes

catching gauzes

separating gauzes (applied for separation of catching gauzes and prevent their baking in the operational process)

We design and produce catalytic systems considering particular working units and individual customer requirements.

Chemical composition of the alloys for the catalyst system

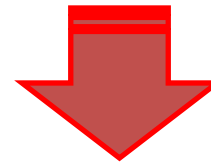
№ п/п	Alloy	Chemical composition, %					
		Pt	Pd	Rh	Ru	W	Y
1	PtPdRd-92,5-4-3,5	92,5±0,3	4,0±0,2	3,5±0,2			
2	PtPdRdRu-81-15-3,5-0,5	81,0±0,7	15,0±0,5	3,5±0,4	0,5±0,3		
3	PtRd-92,5-7,5	92,5±0,3		7,5±0,2			
4	PtRd-95-5	95,0±0,3		5,0±0,3			
5	PtRd-92-8	92,0±0,2		8,0±0,2			
6	PtRd-90-10	90,0±0,3		10,0±0,3			
7	PtPdRd-90-5-5	90,0±0,3	5,0±0,2	5,0±0,2			
8	PdW-5		94,0-95,5			4,30-5,97	0,03-0,20

- PtPdRd-92,5-4-3,5; PtPdRdRu-81-15-3,5-0,5 – For Nitric acid production;
- PtRd-92,5-7,5 – For hydrocyanic acid ;
- PdW-5 – for catching gauzes.

Process

Electrochemical activation

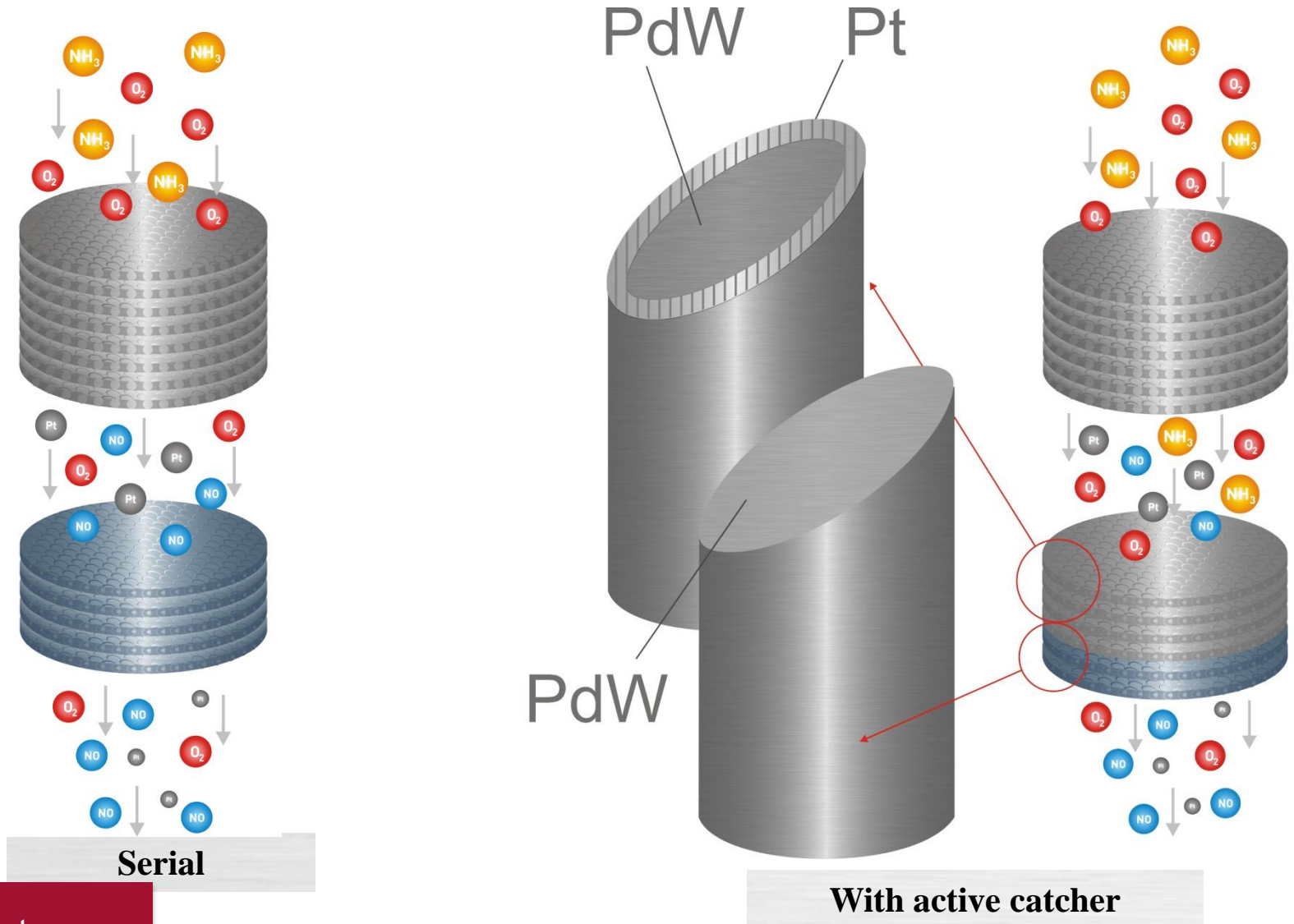
provides increased concentration of dispersed platinum on the gauze surface for easy igniting and maximised conversion.



Advantages of the method

- Enables gauze surface cleaning;
- **Increases** gauze specific surface **10 times**;
- **Increases** content of **platinum** at the surface;
- Precludes gauze additional treatment before mounting;
- Provides catalytic reactor **maximum conversion** reaching in **8-10 hours** compared to usual 6-8 days.

Catalytic system with active catcher



Examples of usage



Our catalytic systems are used on Units with a running up to 6500 hrs

We manufacture catalytic systems for units with reduced investments of precious metals to 55,7 kg.