

Ion Plating Plant FOROS

Application

FOROS Plant with the extended vacuum-arc evaporator and cylindrical vacuum-arc evaporator is designed for application of coatings (TiN, AlTiN, TiAlN, CrN, CrC, TiCN, Al₂O₃, ZrO₂+Y₂O₃ and others) on the inner and outer surfaces of the parts.

Advantages

High quality of coatings. The Plant makes it possible to apply protection coatings on the inner surfaces of cylindrical parts of various diameters, such as separators, bearing cages, bushings, ball valves, barrels and many other equipment parts.

Increase of parts wear-resistance and, accordingly, extension of the service life at a reasonable cost of the plant.

Forms of cooperation

Supply of a standard ready-made product, development, manufacturing and supply of a customized product. Vacuum coatings are widely applied in different spheres of life, for example: medicine (coatings on titanium implants), petrochemical sector (various stop valves), aircraft engineering (heat-resistant coating of turbine blades), shipbuilding (anti-cavitation coating of propellers), military equipment, instrumentation engineering etc. Depending on the requirements to a particular item and operation conditions we can apply any protective coating.



Main parameters*

Parameter	Value	Note
Thickness of applied coating, μm	20-50	Increase of thickness - to be agreed
Coating hardness, N/mm^2	20000-38000	
Chamber inner dimensions, $L \times W \times H$, mm	650×650×750	Chamber shape- vertical cylinder
No. of vacuum-arc cylindrical evaporators, pcs.	1	When item loading evaporator automatically goes down
Number of end vacuum-arc evaporators, pcs.	1	Vacuum-arc evaporators with controlled and uncontrolled arc
Number of extended vacuum-arc evaporators, pcs.	1	
Vacuum-arc evaporator current, A	60-240	
End cathode sizes, Diameter × thickness, mm	80×40 130×26	
Bios feeder, V/A	1200/30	
Heater capacity, KW	12	
Ultimate vacuum, Pa	1.33×10^{-3}	
Vacuum pumping to ultimate vacuum speed, min	30	
No. Of gas puffing channels, pcs.	3	
Control/ visualization	Automatic	LCD touch screen monitor 19"
Installed power requirement, KW	50	3ph. ×380V+N, 50/60Hz
Cold water flow rate, l/min	40	
Compressed air, MPa	0.4-0.6	

* The manufacturer may make the equipment design adjustment that does not impair the operational and service properties.