

PULSE ELECTRICAL EXPLOSION

Pulse Electrical Explosion maker employs high electric voltage and current to produce metallic and metal oxide nanoparticle in gas media. The primary bulk wire is converted into nano powder via explosive process. In this technology, any type of thin conductive wire can be transformed into nano particles. PNF Co. is producing PEE maker in two models PEE10K and PEE50K. The former is in laboratory scale and latter is in industrial scale.



SPECIFICATIONS

Model name		PEE10K	PEE50K
Input power		1P 220 V AC	3P 220 V AC
Output voltage		8-10 KV DC	20-50 KV DC
Power consumption		3KW	10KW
Shot Period		1-5 sec	1-5 sec
Wire	Max. diameter	0.25mm	0.8mm
	Exploding length	3-8cm	10-30cm
Product		most of conductive metal	
Production rate		20g/hr	150g/hr
Average Particle Size		< 100 nm	
System weight		200kg	800kg

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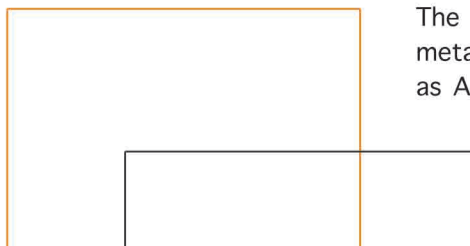
Features

- The most affordable method among the all methods applied to produce Nano particles.
- High productivity
- Massive production.
- Environmental friendly.
- Ability of producing the great range of materials.

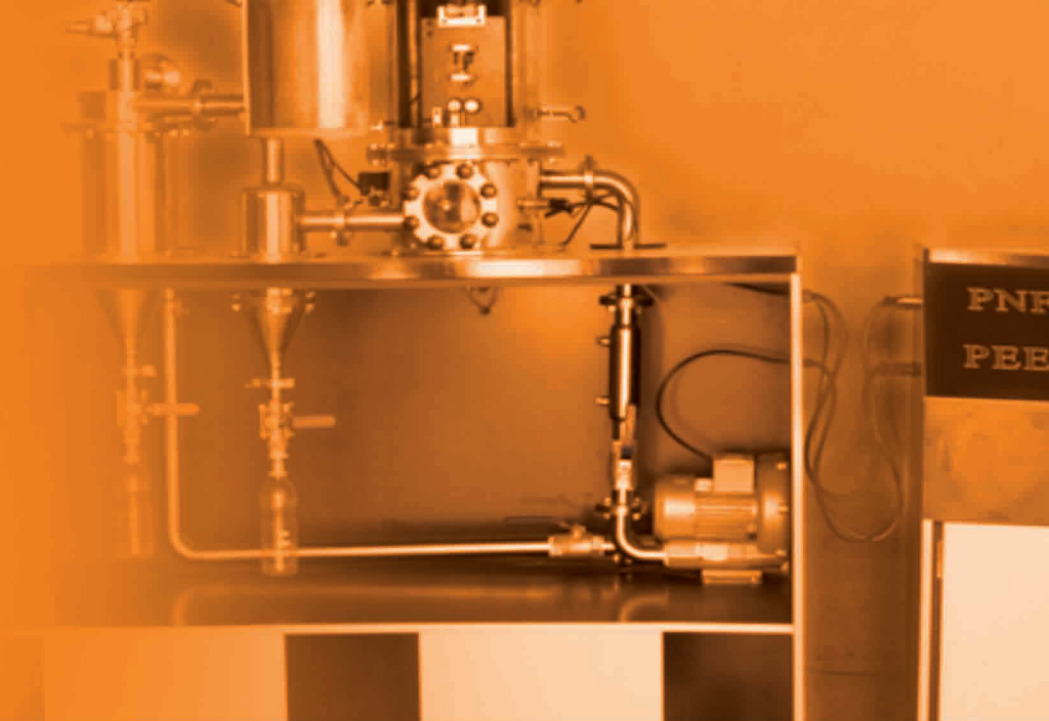
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Applications

The production of different nano metallic, oxides .nitrides powder such as Al,Cu,Al₂O₃,Cu₂O and etc.

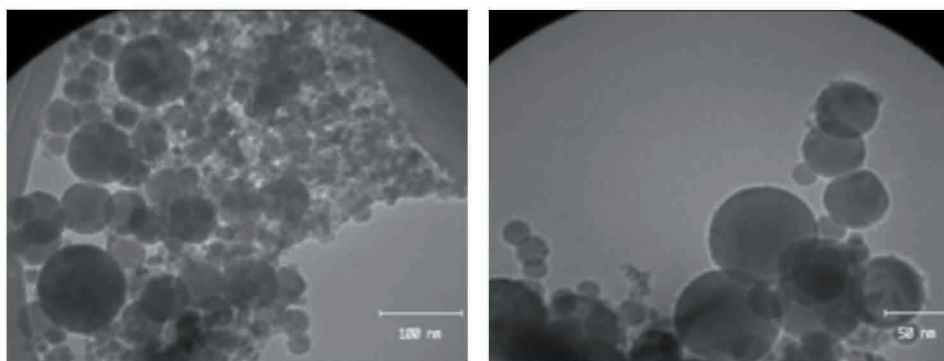


PEE



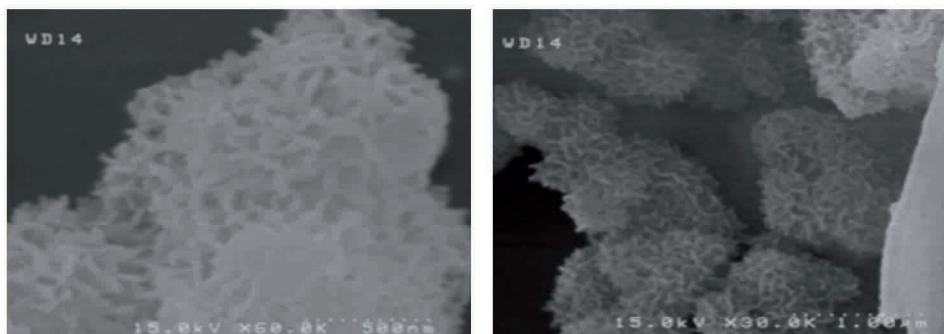
Fundamental Studies

Al₂O₃ from aluminum wire in oxygen atmosphere



Synthesis of nano Al₂O₃ by PEE10k with particle size range of 20-80 nm

Synthesis of AlOOH nano fibers



Synthesis of nano AlOOH by PEE10k with diameter size of 20-30 nm