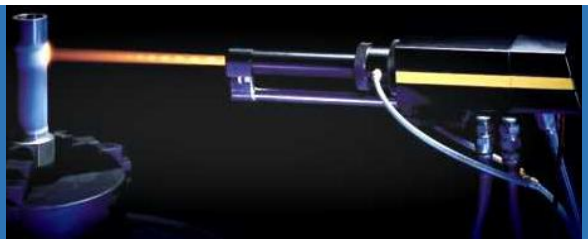
LW POWDER

LWPM



Thermal spraying&weldings









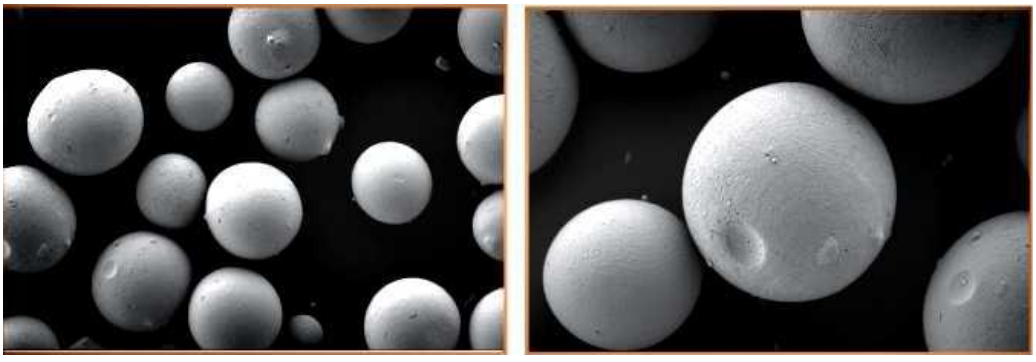
INTRODUCTION

Thermal spraying technology is widely used in pre-protection and remanufacturing industries. The thermal spraying techniques are coating processes in which melted (or heated) materials are sprayed onto a surface.Coating materials include metals, alloys, ceramics, plastics and composites. They are mostly fed in powder form. Thermal Spray Powders are used in a variety of applications including Plasma Transfer Arc (PTA), Spray and Fuse, High Velocity Oxy-Fuel (HVOF), Laser Additive (3D print).

Typically, these applications require hardness, morphology and a particular particle size distribution. The hardness of powder are between HRC 15 and 70. Particle size distribution can be adjusted according to customer needs.

Self-fusing iron base alloys

Self-fusing iron base alloys are basically iron-carbon alloys with additions of chromium, boron and silicon. They are typically used on mechanical parts for resisting wear and weak acid corrosion. Even though their properties are not as good as nickel, cobalt base alloys, they are readily available and inexpensive, making them popular.



Self-fusing iron base alloys												
GRADE	HRC	Chemical Composition									Mesh Size	Typical Application
		C	Cr	Si	Fe	Mo	Ni	Mn	B	Others		
Fe1	35-40	0.15	22	4.5	Bal	2	13		1.6		100/270	Valve
Fe2	38-44	0.15	22	4.5	Bal	2	10		1.8		100/270	Valve seat
Fe5	62-67	4.5	40	1	Bal			0.97	1.8		100/270	Drilling pipe joint
Fe90	50-55	0.15	13.5	1.3	Bal				1.6		100/270	Drilling pipe joint
Fe6	58-60	0.8	7.5	2	Bal		32		4		100/270	Fan blades
Fe45	40-46	0.6	7.5	2	Bal		22		3		100/270	Paper-making machines
Fe304		0.03	18	0.1	Bal		10	0.3			100/270	Paper-making machines
Fe316L		0.03	17	0.2	Bal	2.5	12	0.5			100/270 or 300/500	Paper-making machines
Fe410L	220	0.03	12.5	0.5	Bal			0.1			100/270 or 300/500	Pistons
JG-1	19	0.03	17	0.8	Bal			0.3	1.3			Pistons
JG-2	26	0.04	17	0.3	Bal			0.2	2.6			Pistons
JG-3	46	0.12	16.5	0.8	Bal				0.9			Pistons
JG-4	63	1	4	0.3	Bal	5		0.3				Pistons
Fe253	35	1.75	28	1.3	Bal	4.5	16	0.8			100/270	Engine Valve
Fe253H	40	2.1	28	1.2	Bal	5.5	11.5	1			100/270	Engine Valve
Fe101	62	3.3	2	1	Bal		5	1	1.4		20/300	Extrusion barrels
Fe102	62	2.7	2.8	1	Bal		5.5	1	1.9		20/300	Extrusion barrels
Fe103	62	1.5	4.5	1	Bal		7	1	2.9	W:4.5	20/300	Extrusion barrels
Fe104	60	1.7	4.5	1.5	Bal		11	0.8	3		20/300	Extrusion barrels
Fe105	62	1.5	4.5	1.3	Bal	1.5	12	1	2.8		20/300	Extrusion barrels
Fe106	62	1.08	5.42	2.01	Bal		27	0.89	3.08		20/300	Extrusion barrels
Fe107	62	1.36	6.25	1.56	Bal		16.2	1.02	2.98		20/300	Extrusion barrels

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