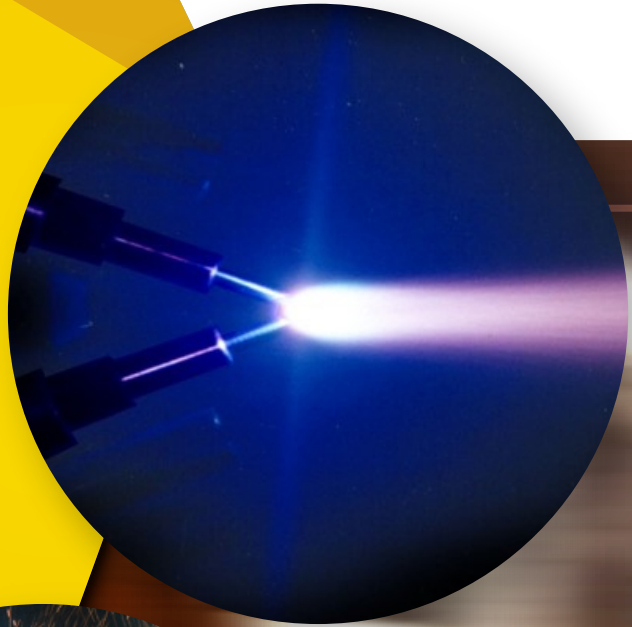


Thermal Spray Wires

Dura-Metal offers the highest quality wire in the market for both Twin Wire Arc Spray (TWAS) and Flame Spray operations. We offer over 30 specialized alloys for Thermal Spray application.



DM GRADE	BASE MATERIAL	DESCRIPTION	HARDNESS
HardBond TWAS	Iron	A PROPIETARY SELF BONDING, HARD, ABRASIVE & CORROSION RESISTANT ARC SPRAY WIRE. Less fumes and higher DE compared to standard amorphous material during spraying. Applications: used as protective coatings on yankee dryer roll, exhaust fan, steel rolls and applicable on a wide variety of high abrasive and corrosive wear operating environments.	65 HRC
BoilerShield TWAS	Iron	A PROPIETARY HIGH HARDNESS ARC SPRAY WIRE DESIGNED FOR BOILERTUBE PROTECTIVE COATINGS. Coating exhibit high bond strength and good abrasion, erosion & corrosion resistance at elevated temperature. Emit less fumes and higher deposition efficiency compared to standard amorphous material during spraying.	63 HRC
HardBond + 18 Cr TWAS	Iron	A SPECIALLY FORMULATED CO-SPRAY ARC SPRAY WIRES DESIGNED FOR HARD PROTECTIVE COATING & GOOD SURFACE FINISH. Good bond strength, abrasion and corrosion resistance alloy combination. for dimensional restoration and corrosion protection. Well suited for Cr-plating of hydraulic cylinder rods, piston rods, sleeves and rollers etc. Suitable for use as a HVOF coating replacement for a variety of applications.	52 HRC
750 TWAS	Iron	AN ECONOMICAL SELF BONDING CORED WIRE DESIGNED FOR ARC SPRAY. Coating exhibit unique ability to produce either smooth or rough profile. Typically used for anti-slip coatings for walkways, stairs, gripping rolls and part restoration. Also applicable as a bond coat for general non-corrosive operating environment.	35 HRC
770 TWAS	Iron	A HIGH QUALITY PROPIETARY HARD, ABRASIVE, EROSION & CORROSION RESISTANT CORED WIRE FOR ARC SPRAY. Excellent resistance to abrasion and particle erosion at elevated temperature. Used as a protective coatings on boiler tubes, yankee dryer rolls, fan blades, anti-skid surfacing and applicable on a wide variety of high abrasive and corrosive wear operating environment.	60 HRC
796 TWAS	Iron	A RICH CHROMIUM CARBIDE CORED WIRE DESIGNED FOR ARC SPRAY. Coatings exhibit good hardness that is abrasion and corrosion resistant. Finish possible by machining with carbide tools. Applications: boiler tubes & tube shields, fan blades and mixing blades etc.	55 HRC
797 TWAS	Iron	A SPECIAL TITANIUM & TUNGSTEN CARBIDE ALLOY BLEND IN AN AMORPHOUS MATRIX DESIGNED FOR ARC SPRAY. Produces a hard protective coating against high abrasion and corrosion at elevated temperature. Applications: fan blades, boiler tubes and a variety of high wear application.	65 HRC
781 TWAS	Iron	A HIGH QUALITY Fe Cr Al CORED WIRE DESIGNED FOR TWIN WIRE ARC SPRAY. Excellent wear and high temperature oxidation resistance. Can be easily machined and yielding a smooth finished surface. DM 781 TWAS low shrink characteristic allow thicker coating build up. Applications include sleeves, boiler tubes, boiler tube shields, shafts or as a bond coat etc.	90 HB
420 TWAS	Iron	A LOW SHRINK CHROME STEEL ARC SPRAY WIRE DESIGNED FOR DIMENSION RESTORATION. Good coefficient of friction, wearing quality and fair resistance to corrosion. Applications: journal sections, cylinder liners, crankshaft bearings and numerous other machine elements.	40 HRC
304 TWAS	Iron	A 18/8 STAINLESS STEEL GRADE ALLOY DESIGNED FOR ARC SPRAYING. Coating exhibit high corrosion resistance and able to withstand high temperature. Applications include rams, pump sleeves, shafts seal rings, valve plugs, printing press transfer ink rollers and as final coating to resurface paper mill cylinders.	95 HB
316 TWAS	Iron	A 300 SERIES STAINLESS STEEL WIRE DEVELOPED FOR ARC SPRAYING. Coating exhibit very high corrosion resistance and excellent machinability. Applications include printing rolls, pump plungers, rams, impellers, pump sleeves, shafts, seal rings, valve plugs and wedges.	95 HB

DM GRADE	BASE MATERIAL	DESCRIPTION	HARDNESS
18-5 TWAS	Iron	A 18/5 STAINLESS STEEL WIRE DESIGNED FOR ARC SPRAYING. Excellent corrosion resistance, low shrink and good machinability coating characteristics. Ability to build up thick coatings. Applications include hydraulic rams, food industry rollers and a variety of machine elements.	90 HB
990 TWAS	Nickel	A PURE NICKEL WIRE SPECIFICALLY DESIGNED FOR ARC SPRAYING. Coating exhibit excelent corrosion resistance with good machinability and electrical conductivity. Applications: machine element repair that require high corrosion resistance. Also used as corrosion protective coating in chemical processing equipment and marine components.	60 HB
920 TWAS	Nickel	A HIGH PURITY NICKEL-20 CHROMIUM WIRE DESIGNED FOR ARC SPRAY PROCESS. Dense well bonded coatings with excellent machinability, electrical conductivity and oxidation resistance at elevated temperature (1800°F / 980°C). Applications : machine element repair, oxidation and heat resistant coating applications etc.	95 HB
945 TWAS	Nickel	A NiCrTi WIRE DEVELOPED SPECIALLY FOR BOILER APPLICATIONS. Coating exhibit superior bond strength and excellent corrosion & wear resistance. Highly resistant to corrosive vanadium and sulfur gases in boiler atmospheres up to 995°C (1825°F). Applications: mainly for boiler tubes in black liquor recovery boilers and coal fired utility boilers.	35 HRC
955 TWAS	Nickel	A HIGH QUALITY NICKEL-5 ALUMINUM PRE-ALLOYED SELF- BONDING WIRE FOR ARC SPRAY. Coating exhibit high bond strength and toughness. Good corrosion and oxidation resistance up to 650°C (1200°F). Used as a bond coat and dimensional restoration like rebuilding nickel based alloys, machinable carbon steels and corrosion resistant steels.	85 HB
984 TWAS	Nickel	A NICKEL-20 ALUMINUM CORED WIRE DESIGNED FOR ARC SPRAYING OR FLAME SPRAYING. Produce superior bond coat that are dense and resistant to high temperature oxidation & thermal shock. Self bonding to a broad range of smooth metal surfaces. It is not self bonding to copper based alloys or tungsten. Used as a bond coat or dimentional restoration repairs.	80 HB
987 TWAS	Nickel	A Ni-Cr-Al-Y NICKEL BASED CORED WIRE DESIGNED FOR ARC SPRAYING. Well bonded and dense coatings with excellent oxidation and corrosion resistance at elevated temperature up to 980°C (1800°F). Applications: undercoat for ceramics on steel, stainless steel & cast iron surfaces.	85 HB
C276 TWAS	Nickel	A Ni-Cr-Mo (Alloy C-276) WIRE DESIGNED SPECIFICALLY FOR ARC SPRAYING. Produce dense, well bonded coatings with very good resistance against corrosion & stress cracking in caustic, acidic and chloride mediums. Excellent resistance to abrasion and metal-to-metal wear. Applications: protective coatings for chemical refining & manufacturing industries components such as pump casings & valves etc.	35 HRC
625 TWAS	Nickel	A HIGH PURITY ALLOY 625 TYPE WIRE DESIGNED FOR ARC SPRAYING. Thls alloy produces dense and well bonded coatings that are resistant to corrosion and stress cracking in caustic mediums. It is also very corosion resistant to a broad range of acidic and chloride environments. Applications: digestors and protective coating on components subjected to oxidation, heat and corrosion operating environment.	95 HB
718 TWAS	Nickel	AN ALLOY 718 TYPE WIRE MATERIAL DESIGNED FOR ARC SPRAYING. Produce self bonding coatings with excellent high temperature oxidation and corrosion resistance in a broad range of acidic, chloride and hot gas environments. Applications: dimensional restoration of parts in power plant and oil drilling industries etc.	30 HRC
Ni30Cu TWAS	Nickel	A Ni-Cu TYPE WIREMATERIAL DESIGNED FOR ARC SPRAYING. For protective coatings mainly for resistance to sea water corrosion and caustic operating environments in marine, petrol chemical industries. Applications: machine element restoration, propellers, steam valve components, printing rolls and shafts etc.	85 HB

DM GRADE	BASE MATERIAL	DESCRIPTION	HARDNESS
ChemShield-TWAS	Nickel	A SELF BONDING Ni-Cr-Mo-Si CORED WIRE DESIGNED FOR ARC SPRAY. Very good corrosion resistance particularly in sulfuric and other high sulfur operating environments. Excellent bond strength and toughness. Applications: protective coating on refineries, power boilers, chemical plant and other medium abrasive and corrosive wear operating environment.	45 HRC
ChemShield-B TWAS	Nickel + Hard Phase	A SELF BONDING Ni-Cr-B-Si-Mo + HARD PHASE CORED WIRE DESIGNED FOR ARC SPRAY. Very good abrasion, erosion and corrosion resistance particularly under seawater and chemical environments. Also exhibit excellent bond strength and toughness. Applications: power boilers, digesters, exhaust fans, shafts and rollers.	65 HRC
1100 TWAS	Aluminium	A HIGH QUALITY PURE ALUMINIUM WIRE MADE EXCLUSIVELY FOR ARC SPRAYING. Protective coatings are resistance to atmospheric, chemical and sea water corrosion. It also exhibit electrical and heat conductivity properties. Applications: this alloy are used mainly for offshore platform.	65 HB
1350 TWAS	Aluminium	A 99.5 % ALUMINIUM CONTENT WIRE MADE EXCLUSIVELY FOR ARC SPRAYING. Protective coatings are resistance to atmospheric, chemical and sea water corrosion. It also exhibit electrical and heat conductivity properties. Applications: mainly for offshore platform, semi-conductor components and anti skid coating for shipdecks.	65 HB
1043 TWAS	Aluminium	A HIGH QUALITY Al-Si WIRE DESIGNED SPECIALLY FOR ARC SPRAYING PROCESS. Coatings attain harder surface than standard pure aluminium. It does not gall easily and coatings are more dense, finer texture and faster spray adhesion. Used for aluminium build up on worn machine parts, and repairing blow holes in aluminium patterns.	75 HB
4540 TWAS	Zinc	A HIGH QUALITY 99.99% PURE ZINC WIRE DESIGNED FOR ARC SPRAY AND FLAME SPRAY SYSTEMS. Excellent corrosion resistance and good conductivity. Used for primary for corrosion protection of steel, electrical conductivity applications and mold making. It is also used as a bond coat when spraying metals onto non-metallic substrates.	70 HB
4541 TWAS	Zinc - Al	A HIGH QUALITY Zn-Al WIRE DESIGNED FOR ARC SPRAY AND FLAME SPRAY SYSTEMS. Good corrosion resistance and conductivity. Used for primary for all atmospheric corrosion protection where zinc or aluminum are been utilized - combining the advantages of both. Note that for all marine and submerged applications, a sealer must be used.	73 HB
4542 TWAS	Tin (Babbitt)	A HIGH GRADE TIN BASED LEAD FREE BABBITT WIRE DESIGNED FOR ARC SPRAY AND FLAME SPRAY SYSTEMS. Good toughness and machinability. Coating exhibit low coefficient of friction. Used for primary to produce dense, well bonded coatings required for high speed and heavy duty bearings.	70 HB
589 TWAS	Molybdenum	A QUALITY PURE MOLYBDENUM WIRE FOR ARC SPRAY OR FLAME SPRAY SYSTEMS. Good resistance to wear and corrosion. Low coefficient of friction and anti galling properties. Range of coating hardness can be achieved by varying air pressure and stand off distance. Used for applications where scuffing and galling is a problem such as piston rings, shift forks and synchronizing rings.	15 - 35 HRC
445 TWAS	Aluminium Bronze	A QUALITY PREALLOYED ALUMINIUM BRONZE WIRE DESIGNED FOR ARC SPRAY. Good bond strength and corrosion resistance properties. Coatings are dense and wear resistance. Applications: mainly housings, bearings, shafts and as bond coat for copper based alloys as the nickel aluminium bond coat does not bond well to copper substrates.	68 HB
499 TWAS	Copper	A HIGH PURITY COPPER WIRE DESIGNED FOR ARC SPRAYING. Produces dense, well bonded coatings with excellent machinability. It is widely used for electrical conductivity and printing roll applications. Other non-electrical applications for copper range from purely decorative purposes to elements requiring protective coating.	40 HB