

Laser Cladding Extend Valve Life

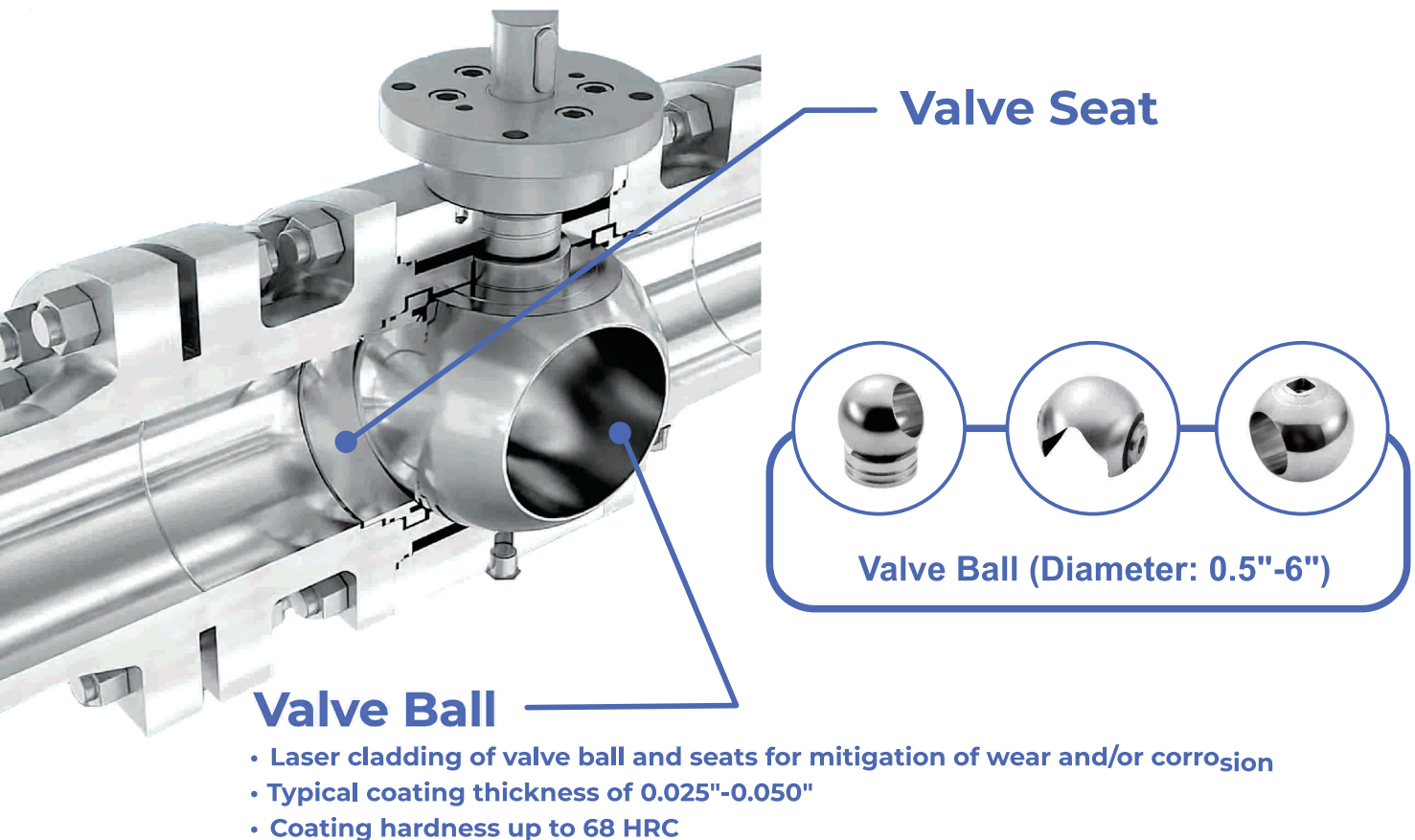


VALVE APPLICATION

Laser cladding, also known as laser metal deposition (LMD), uses a laser beam to melt metal alloy powder and rapidly solidify to form a coating that is metallurgically combined with the matrix, which is used to enhance the performance of the surface of the metal component and extend the life of the component.

Advantages of LMD over more traditional additive processes for ball valves and valve seats include:

- **Low dilution rate**, reduce the thickness of the coating without reducing the wear resistance of the coating;
- **Fine grain, higher hardness**, better impact resistance;
- **The composition segregation is small**, in the strong acid, strong alkali medium corrosion rate is lower;
- **Low porosity**, improve the long-term corrosion resistance of the coating;
- **Low thermal stress**, small heat input, good crack resistance.

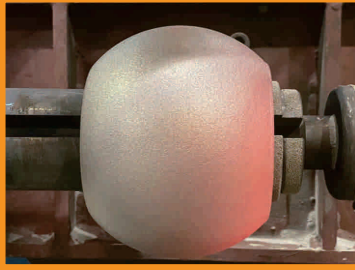


**OUR LMD-BASED VALVE SEALING COMPONENTS,
CHALLENG HARSH CONDITIONS , EXTEND VALVE LIFE.**

WHAT MAKES US DIFFERENT?

Laser Metal Deposition (LMD) for valve wear-resistant coatings is our core work... It's what we do. More than 10 years of Constantly striving to stay at the forefront of this rapidly evolving technology has resulted in us having one of the most professional teams in China, We dedicated to the science of LMD for valve wear-resistant coatings. This expertise ranges from metallurgical sample evaluation to custom LMD equipment design. Helping you with feasibility, qualification, serial production and up to onsite vertical integration is our daily routine.

With annual powder deposition now exceeding 20 tons, we have learned how to help you stay successful in a competitive market. We currently have 15 LMD working units available 24 hours a day.



Ball valve
Laser Cladding



Valve Coating
(HRC62-68)



Valve Seat



Valve Shaft
Laser Cladding

VALVE PRODUCT SERVED

- Gate Valve
- Ball Valve
- Butterfly Valve
- Globe Valve
- Safety Valve
- Rotary Plug Valve
- Stem / stem seat

APPLICATIONS

- Hardfacing overlays
- Corrosion resistant overlays
- Original material restoration
- R&D / feasibility studies
- Systems build & training

PARTIAL LIST OF ADDITIVE ALLOYS

- Low Alloy Steel: 4130/4140/4340/H-13
- Stainless: 304/309/316/347/410/420/15-5PH/17-4PH
- Cobalt Alloys: Stellite 6/21/12/20/SF12/SF1|Tribaloy T900
- Ni Alloys: Inconel 625/718| Hastelloy X| Wcc 5/6/69/84/88
- Bronze: Nickel bronze| Aluminum bronze
- Others: Tungsten carbides | Chrome carbides| various proprietary alloys

STANDARD FOLLOWED & CERTIFICATIONS

- ISO 9001
- ISO 3834
- RCC_M S8000
- ASME boiler & pressure vessel IX

WANT TO LEARN MORE?

Start a conversation today

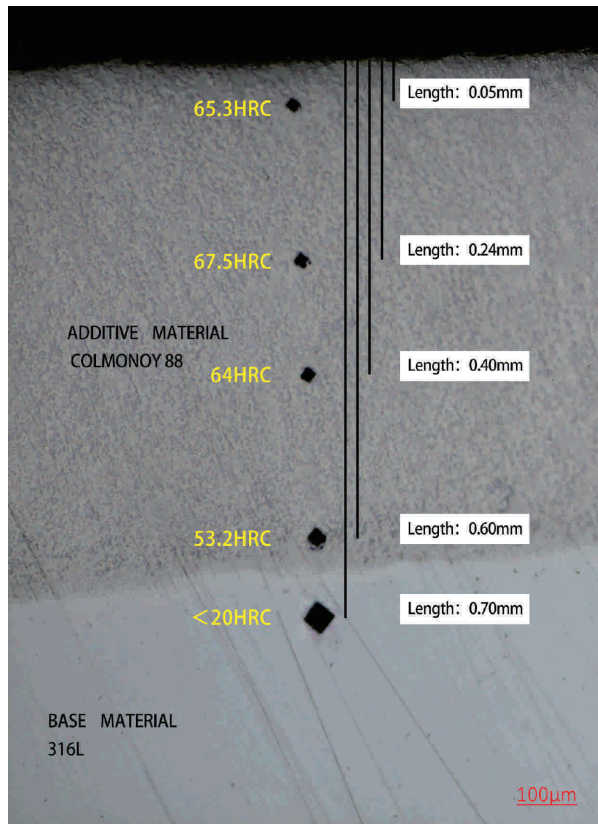
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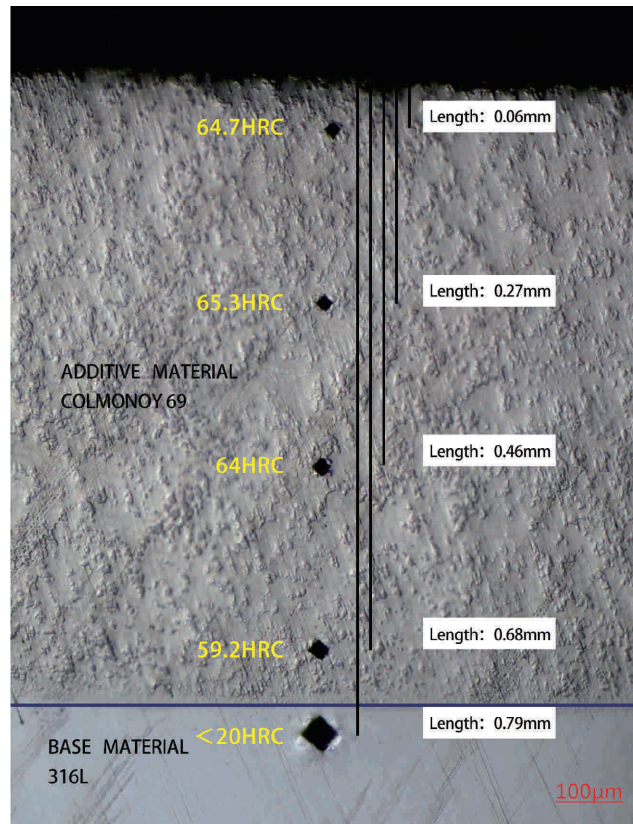
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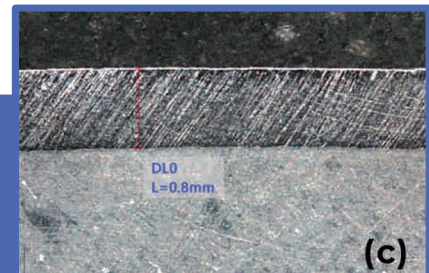
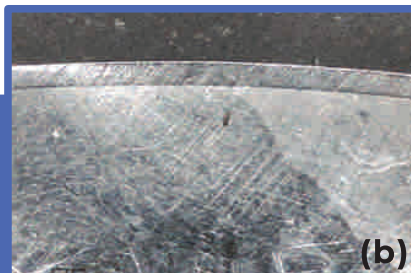
BALL VALVESEAT CROSS SECTION

Qualification cross sectional photo of a 2" ball valve seat. Typical inspection evaluations include porosity, cracking, lack of fusion, coating thickness and coating micro-hardness.

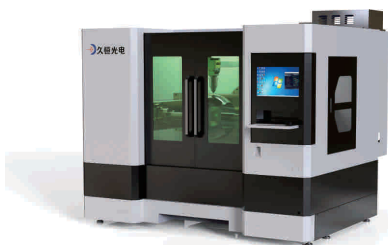


BALL VALVE CROSS SECTION

2" ball valve cross sectional photo illustrating hardness values and distance from the weld interface.



LSW 2" ball valve (a). As well as 50X (b) and 200X (c) cross section photos, to evaluate coating uniformity and porosity.



Interested in integrating a laser cladding system for your facility?

Call +86 17758118083 for more information.

CONTACT

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