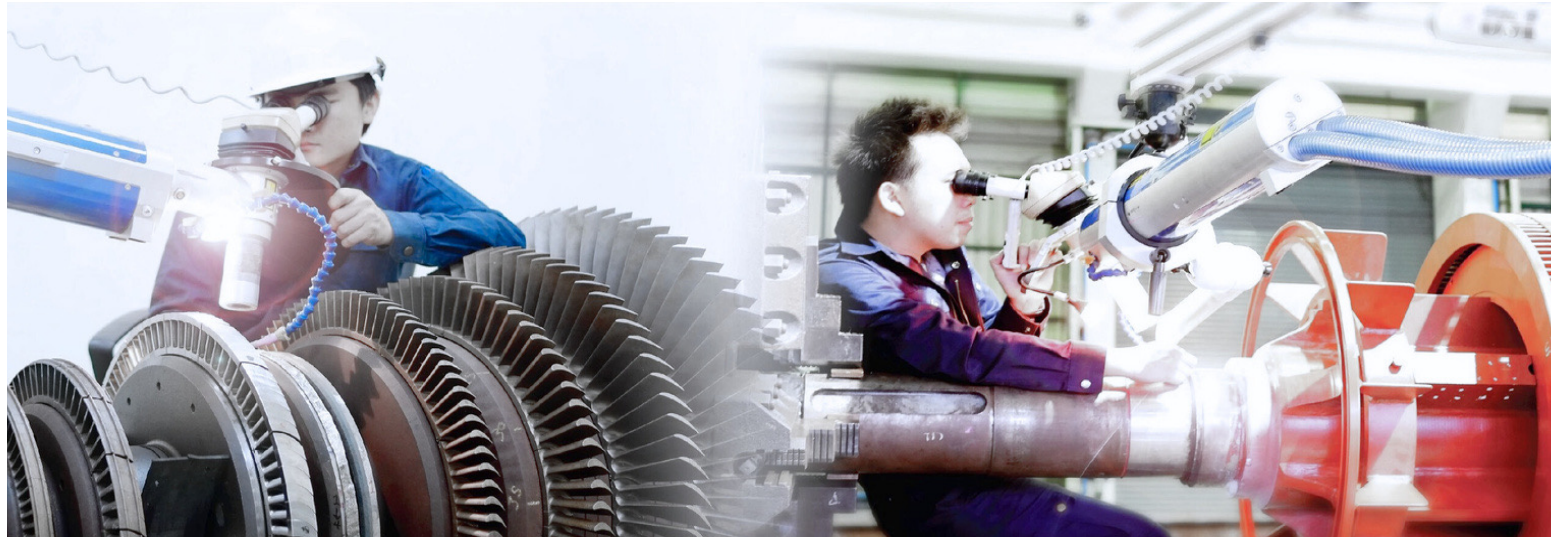


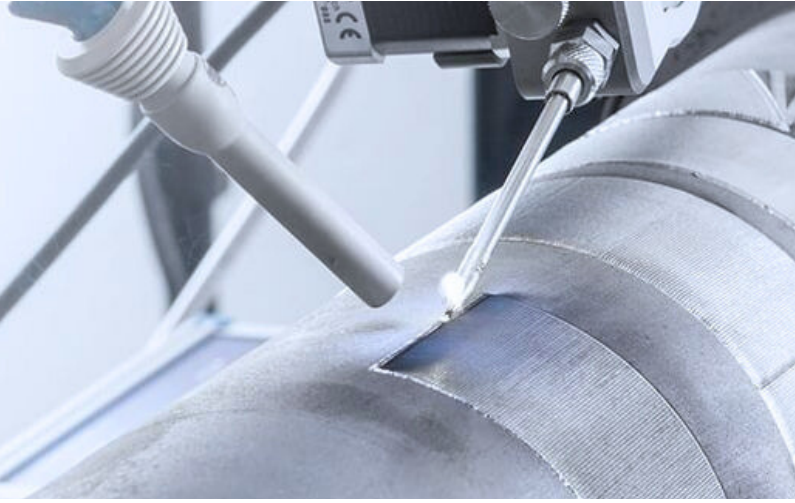


DSI SYMTRACE SDN BHD

COMPANY PROFILE

✉ group@dsilaser-ms.com

🌐 www.dsilaser-ms.com



DSI SYMTRACE SDN BHD is a strategic joint venture between DSI Thailand and SYMTRACE, established to introduce advanced pulsed laser welding technology to Malaysia. With our branch workshop in Shah Alam, Malaysia we provide high-precision, sustainable repair solutions for critical industries including oil & gas, power generation, and petrochemicals. Leveraging over 25 years of Thai-German expertise from DSI Laser Service (Thailand) Co. Ltd. the headquarters of the DSI Group, we specialize in the repair of rotating equipment using pulsed laser welding powered by ALPHA LASER GmbH. This technology is redefining industry standards in repair and restoration.



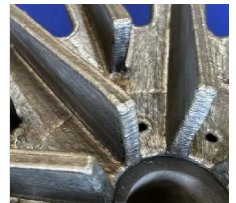
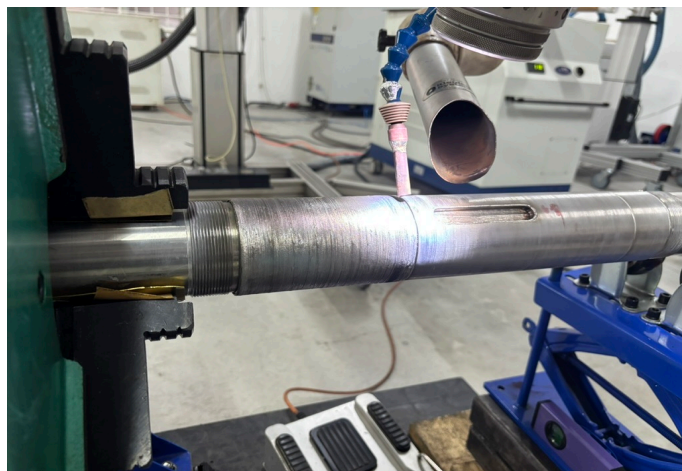
These capabilities enable precise surface rebuilding without compromising the integrity of base materials. With DSI Malaysia, industries in this region gain access to next-generation welding solutions that minimize downtime, prolong equipment lifespan, and significantly reduce total maintenance costs.



Engineered for Rotating Equipment Material Restoration

Works with Almost All Metallic Base Materials

(Cast Iron, Super Duplex, Exotic Alloys, Aluminium, and 50+ More Alloys)



Full Metallurgical Bonding

Strong, permanent fusion with the base material

No Measurable Distortion

Maintains precise dimensions and alignment

Maintains Base Material Integrity

Preserves original material properties

No Pre or Post Heating Required

Faster process, reduced handling time

OUR TEAM

DSI MALAYSIA (JV BRANCH) – 11 Employees
DSI SYMTRACE SDN BHD



DSI THAILAND (HQ) – 47 Employees
DSI LASER SERVICE (THAILAND) CO., LTD.



OUR CERTIFICATION

ISO 14732:2013-12 BRANCH – DSI MALAYSIA

WONG SWEE YEE
DIN EN ISO 14732:2013-12

THANAPHONG DUANGKHIEW
DIN EN ISO 14732:2013-12



DVS GSI SLV

Qualification test certificate for welding operators or weld setters
In the scope of Directive 2014/68/EU Annex 13.1.2

1 of 1 Examining body: GSI mH, NL, SLV Hannover
Test No.: 2025 - 000003-Z

2 Page: 1
3 Manufacturer's welding procedure specification: DSI Syntronics SDN BHD 12A
4 Reference No. (if applicable): DSI-MS-016-120111-24
5 Name of welding operator or weld setter: Wong, Swee Yee

6 Identification: Singapore
7 Method of identification: 1991-05-28, Negeri Sembilan
8 Date and place of birth: DSI Syntronics SDN BHD 12A
9 Employer: DIN EN ISO 14732:2013-12 / AD2000 HP 3.2020-12
10 Code / testing standard: acceptable
11 Job knowledge: acceptable

12 Weld details: Test piece: S21 Range of qualification: S21
13 Welding process: YAG Laser 100W Alpha Laser System
14 Welding equipment: YAG Laser 100W Alpha Laser System
15 Welding unit: Visual Control
16 Details for mechanized welding: Visual Control
17 Visual control / visual remote control: PA
18 Arc sensor control: multi-run per side technique
19 Automatic joint tracking: multi- and single run per side technique
20 Welding position: PA
21 Single run / multi-run: multi- and single run per side technique
22 Material thickness: multi- and single run per side technique
23 Consumable insert: multi- and single run per side technique

24 The qualification is based on:
25 Welding procedure test (see 4.14): X
26 Pre-production welding test (see 4.14): X
27 Standard test piece (see 4.14): X
28 Production test or production sample testing (see 4.14): X
29 Result of the qualification test see document No.: N ISO 9001-1 with ISO 14732:2013
30 Welding procedure qualification record or other documents of testing: Prolegation No.: 5.3.4
31 Date of testing: 15.12.2024
32 Valid until: 09.12.2029

33 Remarks: The requirements of the EC pressure equipment directive 2014/68/EU of personal, appendix 1, 3.1.2 are fulfilled.
Die Funktionskenntnisprüfung wurde durchgeführt und bestanden.

34 Confirmation of the validity by welding coordinator or examiner or examining body for the following test 6 month (Clause 6.27):
35 Date Signature Position or title
36 Append separate sheet if required
37 Translation and further information on the back

Dipl.-Ing. N. Gaiser 13.01.2025
Name, Date and signature of examiner
Halla 1102

DVS GSI SLV

Qualification test certificate for welding operators or weld setters
In the scope of Directive 2014/68/EU Annex 13.1.2

1 of 1 Examining body: GSI mH, NL, SLV Hannover
Test No.: 2025 - 000003-Z

2 Page: 1
3 Manufacturer's welding procedure specification: DSI LASER SERVICE Thailand Co., Ltd. No. 202401 - 000014-2
4 Reference No. (if applicable): DSI-MS-016-120111-24
5 Name of welding operator or weld setter: Duangkiew, Thanaphong

6 Identification: Thailand
7 Method of identification: 1989-06-20, NAK
8 Date and place of birth: DSI Laser Service Thailand Co., Ltd.
9 Employer: DIN EN ISO 14732:2013-12 / AD2000 HP 3.2020-12
10 Code / testing standard: acceptable
11 Job knowledge: acceptable

12 Weld details: Test piece: S21 Range of qualification: S21
13 Welding process: Fiber Pulse Laser
14 Welding equipment: 100 Watt Fiber Pulse Laser (PA/Fiber Laser) / 200 Watt Fiber Pulse Laser (PA/Fiber Laser)
15 Welding unit: Visual Control
16 Details for mechanized welding: Visual Control
17 Visual control / visual remote control: PA
18 Arc sensor control: multi-run per side technique
19 Automatic joint tracking: multi- and single run per side technique
20 Welding position: PA
21 Single run / multi-run: multi- and single run per side technique
22 Material thickness: multi- and single run per side technique
23 Consumable insert: multi- and single run per side technique

24 The qualification is based on:
25 Welding procedure test (see 4.14): X
26 Pre-production welding test (see 4.14): X
27 Standard test piece (see 4.14): X
28 Production test or production sample testing (see 4.14): X
29 Result of the qualification test see document No.: Prolegation No.: 5.3.4
30 Welding procedure qualification record or other documents of testing: Prolegation No.: 5.3.4
31 Date of testing: 04.03.2024
32 Valid until: 03.03.2030

33 Remarks: The requirements of the EC pressure equipment directive 2014/68/EU of personal, appendix 1, 3.1.2 are fulfilled.
The functional proficiency test has been carried out and passed.

Dipl.-Ing. N. Gaiser 15.03.2024
Name, Date and signature of examiner
Halla 1102

DSI

PERFORMANCE QUALIFICATION TEST RECORD

1. Name of the welding operator or weld setter: Duangkiew, Thanaphong
2. Date of the test: 04.03.2024
3. Position: S21
4. Test piece: S21
5. Welding process: Fiber Pulse Laser
6. Welding equipment: 100 Watt Fiber Pulse Laser (PA/Fiber Laser) / 200 Watt Fiber Pulse Laser (PA/Fiber Laser)
7. Welding unit: Visual Control
8. Details for mechanized welding: Visual Control
9. Visual control / visual remote control: PA
10. Arc sensor control: multi-run per side technique
11. Automatic joint tracking: multi- and single run per side technique
12. Welding position: PA
13. Single run / multi-run: multi- and single run per side technique
14. Material thickness: multi- and single run per side technique
15. Consumable insert: multi- and single run per side technique

16. The qualification is based on:
17. Welding procedure test (see 4.14): X
18. Pre-production welding test (see 4.14): X
19. Standard test piece (see 4.14): X
20. Production test or production sample testing (see 4.14): X
21. Result of the qualification test see document No.: Prolegation No.: 5.3.4
22. Welding procedure qualification record or other documents of testing: Prolegation No.: 5.3.4
23. Date of testing: 04.03.2024
24. Valid until: 03.03.2030

25. Remarks: The requirements of the EC pressure equipment directive 2014/68/EU of personal, appendix 1, 3.1.2 are fulfilled.
The functional proficiency test has been carried out and passed.

Dipl.-Ing. N. Gaiser 15.03.2024
Name, Date and signature of examiner
Halla 1102

ISO 3834-2:2021 HQ – DSI LASER SERVICE (THAILAND) CO., LTD.

DVS ZERT

CERTIFICATE
D-ZE-16083-01-00-ISO3834-2015.0053.006
DVS ZERT hereby certifies that the company

DSI Laser Service Thailand Co. Ltd.
33/1 Moo 5 Tambol Nongmalaeng
20000 Chonburi
Thailand

has furnished proof to fulfil
the quality requirements for welding according to
ISO 3834-2:2021
in the extent mentioned on the reverse side.

validity: 25.11.2022 until 16.02.2026

Düsseldorf, 25.11.2022
Place and date of issue
Prof. Dr.-Ing. Kasper
Lead Auditor

Dipl.-Ing. Gunkle
Head of certification body

DVS ZERT GmbH, Achener Straße 172, 40223 Düsseldorf, GERMANY

This standard specifies comprehensive quality requirements for **fusion welding of metallic materials**. It applies to both **workshop welding** and **site welding** across all manufacturing sectors.

ISO 3834-2:2005 represents the **highest level** of quality requirements in the ISO 3834 series, showcasing a company's commitment to maintaining strict standards in welding operations.

Certificate No: D-ZE-16083-01-00-ISO3834-2015.0053.006
(Valid Until 16th Feb 2026)

Other Certification & Standard

ISO 14732 Qualifying Welding Operators

AWS D17.1 Specification for fusion welding of aerospace application

AWS D14.6 Specification for Welding of Rotating Elements



OUR CUSTOMER



PETRONAS
CARIGALI



USAHAWAN
BERSAMA TEKNIK SDN BHD
(843387-03)



JEBSEN & JESSEN



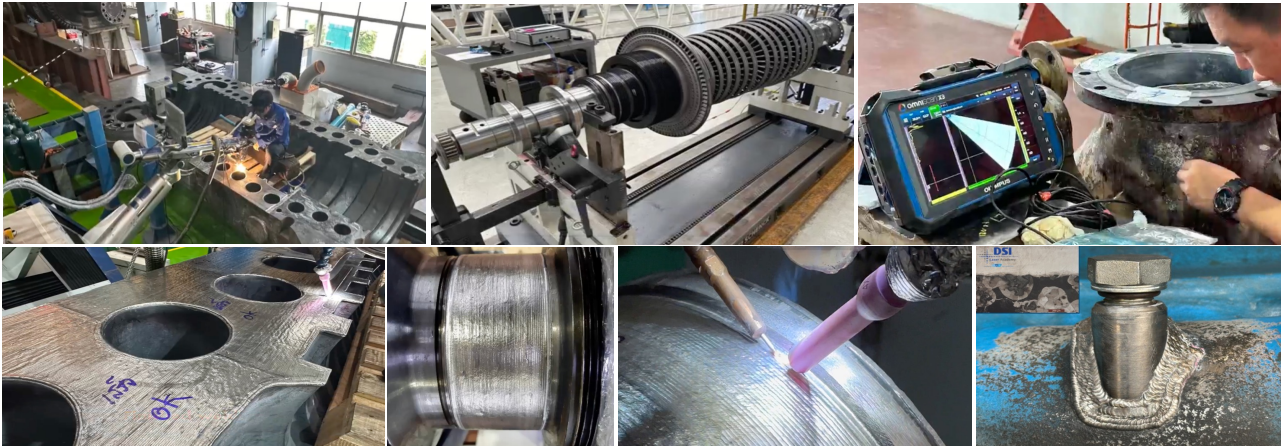
TOYOTA TSUSHO



TRIM



OUR EXPERTISE



HEAVY INDUSTRY

ROTATING EQUIPMENT WELDING REPAIR

DSI SYMTRACE SDN BHD delivers precision pulsed laser welding (PLW) for the restoration of high-value components in heavy industry and oil & gas especially rotating equipment such as pumps, compressors, steam/gas turbines, and critical valves. Our process produces a fully metallurgical bond with minimal heat input, enabling dimensionally precise rebuilds, low distortion, and superior integrity on complex geometries and sensitive base materials. The result is faster turnarounds, extended equipment life, and measurable ESG benefits compared with conventional thermal spray, brazing, or arc welding methods.

PUMPS

Casing and cover sealing lands, volute wear areas, suction/discharge nozzles
Shaft journals and keyways, bearing seats, wear rings
Impeller eyes/vanes, balance holes, hub interfaces

COMPRESSORS

Diaphragm sealing surfaces and labyrinth lands
Shaft end-fits, keyways, and coupling seats
Impeller tips/eyes, balance drum surfaces

TURBINES

Thrust collars, journal shoulders, seal strips/lands
Blade roots (non-structural build-ups), diaphragm/seal ring faces
Casing split lines and gasket lands

VALVE & OTHERS

Seat rings, stems, bonnet sealing faces
Heat-exchanger tube sheets (local rebuilds), mixer/agitator shafts
Specialty tooling for drilling/production

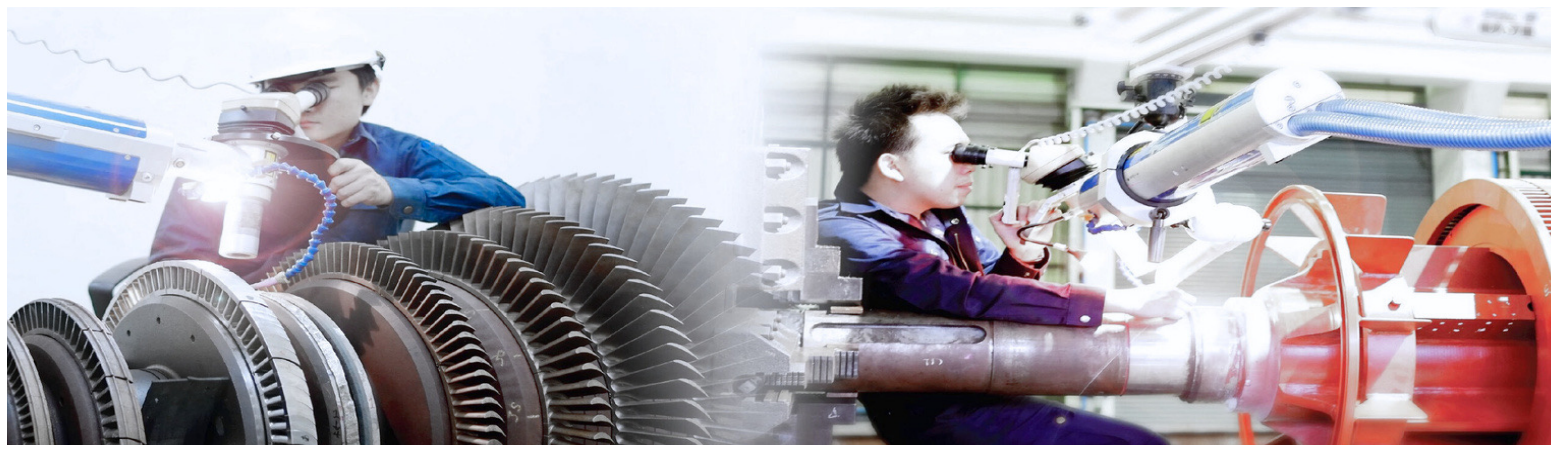
OUR EXPERTISE

CASTING / MOLDING INDUSTRY MOLD & INSERT

Combining custom-designed laser wires with ultra-precise pulsed welding, we provide solutions for:

- Shape modifications
- Crack and flash repairs
- Ejector pin hole restoration
- Deep area (rib) welding
- Surface finishing (mirror & etching)
- Wear and scaling damage restoration
- Pin-hole (porosity) and fine detail repairs





WHY PULSE LASER WELDING (PLW) IS REVOLUTIONIZING INDUSTRIAL REPAIR?



A New Standard in Rotating Equipment Repairs

Traditional welding techniques often introduce heat distortion, material stress, or dimensional changes that are unacceptable for high-precision rotating equipment such as turbines, compressors, and pumps. Pulse Laser Welding (PLW) overcomes these challenges, enabling accurate, reliable, and sustainable repair solutions that were previously impossible. At DSI Malaysia, we apply over two decades of experience in laser technology to deliver repair processes that restore critical components to OEM standards, extending service life while reducing downtime and replacement costs.

Ultra-Localized Heat Control

PLW uses rapid bursts of laser energy, each lasting only milliseconds. Heat is confined to a microscopic area, minimizing the heat-affected zone (HAZ). This prevents cracking and preserves the base material's original properties.

No Measurable Distortion Welding Build-Up

Unlike conventional welding, PLW introduces negligible heat input. Components maintain their geometry and dimensional accuracy, even after material build-up. Critical for high-speed rotating equipment where balance and tolerance are essential.

Precision at the Micron Level

Ideal for thin edges, sealing areas, and high-tolerance components. Weld deposition is accurate and repeatable, ensuring the final part remains within strict dimensional limits.

Full Metallurgical Bonding

Unlike thermal spray or coating methods, PLW achieves true fusion between filler wire and base material. This ensures superior strength, durability, and long-term reliability under high stress and rotating conditions.

Dissimilar Material Welding

PLW enables joining of materials that are difficult with conventional welding. This opens new options for corrosion resistance and performance upgrades.

Risk-Free Process

Pulse Laser Welding eliminates the need for pre-heating or post-heating. Each millisecond energy burst is so highly concentrated that it welds precisely without accumulating heat in the base material. As a result, there is no residual heat stress to relieve afterward. Imagine achieving perfect welds without the complexity of pre- or post-heating.

Sustainability & Cost Efficiency

Restores high-value parts instead of replacing them.
Cuts lead time, saves resources, and reduces environmental footprint aligning with ESG goals.



WHAT IS PULSE LASER WELDING (PLW)?



Redefining Precision in Welding

Pulse Laser Welding (PLW) is an advanced welding process that uses short, high-energy laser pulses to deposit filler material with pinpoint accuracy. Each laser pulse lasts only milliseconds, creating controlled, localized melting that immediately solidifies resulting in welds with minimal heat impact, zero distortion, and full metallurgical bonding.

This makes PLW uniquely suited for repairing high-value, high-precision components where traditional welding or coating processes fall short. How PLW Differs from Conventional Welding

	Conventional Welding	Pulse Laser Welding (PLW)
Heat Input	Continuous arc, large heat-affected zone	Millisecond pulses, ultra-localized heat
Distortion Risk	High, especially on thin edges or precision parts	Negligible, no measurable distortion
Material Compatibility	Limited, often requires pre/post heat treatment	Can weld dissimilar metals. Doesn't require pre/post heat treatment
Precision	Millimeter-scale, harder to control in small areas	Micron-level accuracy, ideal for sealing areas & edges
Surface Finish	Requires significant post-machining	Minimal post-processing, smooth finish
Suitability for Rotating Equipment	Risk of imbalance due to distortion	Maintains geometry & balance integrity

Pulse Laser Welding (PLW) vs. Laser Cladding

From the laser technology standpoint, the difference between Pulse Laser Welding (PLW) and Laser Cladding is fundamental.

Pulse Laser Welding (PLW) uses a pulsed laser source that releases extremely short, high-intensity bursts of energy. Each pulse can reach very high peak power, but because it lasts only milliseconds, the overall heat input into the base material remains minimal. This unique balance high peak power with low total heat input allows PLW to precisely control the weld pool and minimize distortion, even on sensitive or high-tolerance components.

Laser Cladding, on the other hand, relies on a continuous wave (CW) laser. The beam runs steadily and delivers more sustained heat into the part. While effective for depositing bulk material and overlays, it introduces higher thermal input compared to PLW.

Pulse Laser Welding meets established welding benchmarks and standards ensuring full metallurgical bonding that qualifies as true welding under international definitions. Pulse Laser Welding restores parts with precision welding, achieving distortion-free, fully bonded repairs that align with welding standards.



CONTACT US

DSI SYMTRACE SDN. BHD. 202401029569 (1575417P)

+6016-396 9668

group@dsilaser-ms.com

www.dsilaser-ms.com

12A, Jalan Angklung 33/20 Shah Alam Technology Park, Seksyen 33, 40400 Shah Alam, Selangor

(HQ)DSI Laser Service (Thailand) Co., Ltd.

Nong Mai Daeng, Chon Buri District, Chon Buri 20000, Thailand

www.dsilaser.com