

#### **DATES, PRICE AND REGISTRATION\***

24. June - 12. July 2019 | 4.600,00 €

Please transfer the fee until the start of the event by indicating the invoice number.

The online-registration can be found on our website: www.slv-muenchen.de

\*Draft of the conditions of participation of GSI mbH, NL SLV München at www.slv-muenchen .de.

This information is supplied without liability.

#### **HOW TO REACH US**

From the airport: take the S-Bahn S1/S8 to Central Station
From Central Station: take the subway U1 direction Olympia
Einkaufszentrum, subway stop Maillingerstrasse/exit Lazarettstrasse (approx. 10 min. footpath)

By car: on Mittlerer Ring (West) to Landshuter Allee, exit Neuhausen A map can be found at www.slv-muenchen.de.

Please note: limited number of parking spaces, park license area. Warning - Green Zone! We suggest the use of public transport.

#### INFORMATION

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GSI - Gesellschaft für Schweißtechnik International mbH Branch SLV München Schachenmeierstraße 37 · 80636 München



## GSI – Gesellschaft für Schweißtechnik International mbH

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# **EUROPEAN THERMAL SPRAYING SPECIALIST (ETSS)**

according to EWF 459

in English language

24 June - 12 July 2019



www.slv-muenchen.de

#### **PREFACE**

High-quality and economic thermal spraying requires special technical knowledge. Thermally sprayed coatings are applied in many fields. The requirements to the quality of the sprayed coatings are often very high. The necessary quality of the coating is only efficient if planning, execution and controlling of a thermally sprayed layer is performed by a skilled expert from the first draft to the end of the workshop job.

Within the scope of the common professional education the manifold details to be observed for experts spraying cannot be taught to the required extent. A supplementary education is required which has been created by the EWF — European Federation for Welding, Joining and Cutting — with the course of the European Thermal Specialist.

This course is implemented according to the training guideline EWF 459.

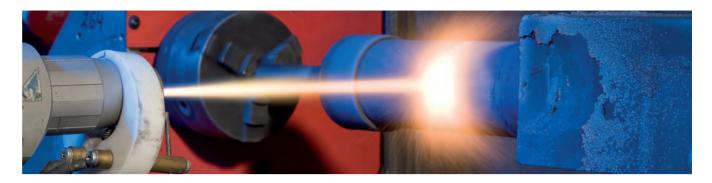


### **PARTICIPANTS**

Supervising/coordinating personnel, foremen, executives in the field of thermal spraying

Limited number of participants

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#### **COURSE TOPICS - FOCUS**

#### PART 1: THEORETICAL TRAINING

#### 1. Thermal spraying processes:

#### Introduction, process fundamentals, environmental aspects

Mechanical, chemical, thermal material corrosion attack; surface protection options; flame spraying; high-velocity flame spraying; electrical arc spraying; plasma spraying, low-pressure plasma spraying; handling all spraying processes; environmental aspects and waste disposal

#### 2. Material selection and bonding mechanisms

Coating function & related materials, spray materials, bonding mechanisms

#### 3. Spraying; health/work safety

Prerequisites for thermal spraying, surface preparation/pre treatment, base materials, substrates, bond coats, intermediate layers, working procedure of thermal spraying, post treatments/processing, work safety, accident prevention

#### 4. Spray results and documentation

Spray results, defects/imperfections; measuring, recording, inspecting and documentation

#### 5. Engineering applications and quality management

Economic aspects, quality management; other spraying processes and new developments; typical applications, and case studies

#### PART 2: PRACTICAL TRAINING

- P1: Practical demonstration of the different spray processes
- P2: Practical instructions thermal spraying
- P3: Practical demonstration of fusioning and post treatment
- P4: Visual inspection and testing

#### REQUIRED QUALIFICATION:

- a) Specific technical qualifications as a master in trade or industry, education either as a technician or engineer with a two-years of professional experience
- b) EWF qualification acc. to training guideline (EWF 507) as European Thermal Sprayer (ETS) and min. 2 years of experience
- c) Thermal Sprayer and 5 years of experience or qualification as a skilled worker in the metal processing trade and min. of 3 years of experience in a technology similar to spraying (skilled worker with certificate by the IHK – Industry of Trade and Commerce)

For participants, only fulfilling the required qualification according to b) and c) a qualification test is required.

#### TRAINING STRUCTURE AND DURATION (teaching units)

Part 1	Theoretical Training	81
Part 2	Practical Training	27
Exam		4
In total		112

#### **FULLTIME COURSE OF TRAINING**

Monday - Thursday 8.00 a.m. until 4.00 p.m., partially until 4.50 p.m. Friday 8.00 a.m. until 2.20 p.m. or until 3.10 p.m.

#### **EXAMS**

written

#### COMPLETION OF THE COURSE

After having passed the exam, the participant will receive an EWF-diploma European Thermal Spraying Specialist.