



SURFACE SOLUTIONS

Amazing Opportunities



FINAL PROGRAM





WELCOME TO ITSC 2022 IN VIENNA, AUSTRIA

Second attempt:

After the cancellation of the ITSC 2020 in-person event, we will meet **face-to-face** for the first time after two years in **Vienna, Austria for ITSC 2022**. ITSC 2022 will be held in the Austria Center Vienna (ACV).

There are lots of event highlights for ITSC interested attendees, who are looking for new coating solutions and who want to learn more about practicable possibilities of surface treatment technologies. Under the slogan "Surface Solutions", ITSC invites visitors to a "3-Day Exposition", to understand the versatility of different coating technologies and to discover how flexible thermals spray can be.

The "Industrial Forum" is another characteristic of ITSC. This Forum will include practical demonstrations on industry related topics, products and solutions.

One highlight will be offered at ITSC 2022 for the first time. "Thermal Spray in a Nut Shell" will be held on the first conference day. This session will cover thermal spray processes with its main applications and its significance for different branches. All registered visitors, conference and exposition, are welcome.

Last but not least ITSC offers new technology oriented topics, such as **Cladding Technologies** which have also become more and more interesting for end users. Cladding also fulfills many requirement specifications in an excellent way.

ITSC 2022 will also feature the latest improvements in the field of **Additive Manufacturing** (AM). For that, thermal spray offers magnificent technological basis for new AM applications.

A fixed point of the technical program will be again the Session **"Young Professionals"**. ITSC 2022 is again supporting young talents becoming part of the worldwide thermal spray family.

In total, ITSC never offered more highlights!

We look forward to welcoming you in Vienna, Austria!

Jens Jerzembeck Head of Research and Technology DVS - German Welding Society

Organizers









SPONSORING

DVS – German Welding Society and TSS – Thermal Spray Society, ASM International, are pleased to announce the following sponsors of ITSC 2022:

EXCLUSIVE SPONSORSHIPS



GTV Verschleißschutz GmbH, Germany Höganäs GmbH, Germany Oerlikon Metco AG, Switzerland

ADDITIONAL SPONSORSHIP





POLYCONTROLS, Canada
SAINT-GOBAIN CERAMICS – SGP, United States of America

Supporting Partners





Media Sponsors







CONTENTS

WELCOME TO ITSC 2022 IN VIENNA, AUSTRIA	03
SPONSORING	04
CONFERENCE	06
TIME SCHEDULE ITSC 2022 CONFERENCE AND EXPOSITION	08
CONFERENCE COMMITTEES AND ENDORSING SPONSORS	10
POSTER SESSION / THERMAL SPRAY IN A NUT SHELL / INDUSTRIAL FORUM	12
PLAN AUSTRIA CENTER VIENNA	14
EXPOSITION	16
Kick-off ITSC 2022 Exposition	16
Exhibitor Networking Reception and Poster Session	16
Exposition Hours	
Further Information	
Expo Only	16
CORPORATE SUPPORTERS	16
EXHIBITOR LIST	18
FLOORPLAN	20
SOCIAL EVENTS PROGRAM / AWARDING	22
Opening of ITSC 2022 with Plenary Lecture and Awards Presentation	22
Session "Young Professionals" with Awards Presentation	22
Exhibitor Networking Reception	
Social Event Evening in the "Heuriger" (winery event)	22
PRESENTING AUTHORS, POSTER PRESENTERS AND SESSION CHAIRS ITSC 2022	24
GENERAL INFORMATION	28
Note from the Organizer	
Venue / Registration	
Event Documents	
Catering	29
Transportation / Parking	
Entry to Austria	
Time	30
Tips for Vienna	
Hotel Information	30
AUSTRIA CENTER VIENNA (ACV)	31



CONFERENCE

The ITSC 2022 conference is an opportunity for the global thermal spray community to meet, exchange information and conduct business. This outstanding annual event in the world of thermal spray technology presents the latest advancements in application, research and development in the field of thermal spray.

To complement the technical program, a 3-Day Exposition featuring an Industrial Forum as well as a Poster Session and a new session "Thermal Spray in a Nut Shell" will take place.

Please mark your calendar for the special ITSC 2022 events:

Opening of ITSC 2022 with Plenary Lecture and Awards Presentation

Wednesday, May 4, 2022, 09:00, ACV, Hall D

Exposition (kick-off)

Wednesday, May 4, 2022, 12:30, ACV, Hall X2

Exhibitor Networking Reception and Poster Session

Wednesday, May 4, 2022, 18:00, ACV, Foyers, Hall X2

Social Event Evening in the "Heuriger" (winery event)

Thursday, May 5, 2022, 19:00, Heuriger 10er Marie

Organization

DVS – German Welding Society
Simone Weinreich / Brigitte Brommer
Aachener Str. 172
40223 Düsseldorf, Germany
P +49 211 1591-302/-303
F +49 211 1591-300
tagungen@dvs-hq.de

Specialist Information

DVS – German Welding Society Jens Jerzembeck Aachener Str. 172 40223 Düsseldorf, Germany P +49 211 1591-173 F +49 211 1591-200 jens.jerzembeck@dvs-hg.de

ITSC 2022 Venue

Austria Center Vienna (ACV) Hall D, Hall G1, Hall G2, Hall K2, Hall -32/33, Hall X2 (Level -2) Bruno-Kreisky-Platz 1 1220 Wien (Vienna), Austria



Now Available in Europe!

Start Your Online Ordering Experience with

myMetco

24/7 Access to Advanced Materials and Spare Parts



TIME SCHEDULE ITSC 2022 CONFERENCE AND EXPOSITION

(Session Overview)

12:00 – 18:00 ITSC 2022 Exposition, ACV, Hall X2 (Level -2)

		w	ednesday, May 4, 2022		
Time	Hall D	Hall G1	Hall G2	Hall -2.32/33	Hall K2
09:00	Opening: • Welcome • Plenary Lecture • TSS Hall of Fame / TSS President's Award				
10:30			Coffee Break, ACV, Hall X2		
10:50	Aviation Industry I	Modeling & Simulation I	Arc Spraying	Pre- & Post-Treatment	Thermal Spray in a Nut Shell
12:30	Lunch Break, ACV, Hall X2 Kick-off ITSC 2022 Exposition, Hall X2 Poster Session, ACV, Hall X2				
14:00	Automotive Industry	HVOF/HVAF Spraying I	Precision Melt Engineering	Suspension Spraying I	Thermal Spray in a Nut Shell
15:20	Coffee Break, ACV, Hall X2				
15:40	Session "Young Professionals" with Awards Presentation				
17:00	 ITSC Best Paper Awards Oerlikon Metco Young Professionals Award 				
17:45	End of ITSC 2022 Conference Program				
18:00	Exhibitor Networking Reception, ACV, Hall X2 Poster Session, ACV, Hall X2				

10:00 - 16:00 ITSC 2022 Exposition, ACV, Hall X2 (Level -2)

	Thursday, May 5, 2022				
Time	Hall D	Hall G1	Hall G2	Hall -2.32 / 33	Hall K2
09:00	Aviation Industry II	HV0F/HVAF Spraying II	New Processes I	Metal Coatings I	Industrial Forum I: Coatings, Applications, Materials
10:40	Coffee Break, ACV, Hall X2 Poster Session, ACV, Hall X2				
11:00	O Industrial Gas Turbines Modeling & Simulation II Wear Protection I Nanomaterial Coatings State of the Art alternative Surface		Industrial Forum II: State of the Art in alternative Surface Technology Processes		
12:40	Lunch Break, ACV, Hall X2 Poster Session, ACV, Hall X2				



	Thursday, May 5, 2022				
Time	Hall D	Hall G1	Hall G2	Hall -2.32 / 33	Hall K2
13:40	Cold Gas Spraying I	Modeling & Simulation III	Medical Industry	Electronics & Sensors	Industrial Forum III: Equipment & Diagnostics
15:20	Coffee Break, ACV, Hall X2 Poster Session, ACV, Hall X2				
15:40	Cold Gas Spraying II Ceramic Coatings High Entropy Alloys I General Plant Engineering Industrial Forum IV: Equipment & Diagnostics				
17:20	End of ITSC 2022 Conference Program				
19:00	Social Event Evening in the Heuriger (winery event)				

10:00 – 14:00 ITSC 2022 Exposition, ACV, Hall X2 (Level -2)

			Friday, May 6, 2022		
Time	Hall D	Hall G1	Hall G2	Hall -2.32 / 33	Hall K2
09:00	Additive Manufacturing	Laser Cladding	New Processes II	Wear Protection II	Industrial Forum V: Equipment & Diagnostics
10:40	Coffee Break, ACV, Hall X2 Poster Session, ACV, Hall X2				
11:00	Metal Coatings II Cold Gas Spraying III		Characterization & Testing Methods I	Renewable Power Generation	Industrial Forum VI: Others, Process Peripheral
12:40	Lunch Break, ACV, Hall X2 Poster Session, ACV, Hall X2				
13:40	Suspension Spraying II Cold Gas Spraying IV Characterization & Testing Methods II High Entropy Alloys II Process, Diagnostics, Sensors & Controls				
15:20	End of ITSC 2022 Conference Program				

CONFERENCE COMMITTEES AND ENDORSING SPONSORS

General Chairs

W. Krömmer The Linde Group, Primarily Responsible (DE)

W. Lenling TST Coatings (US)

DVS Representatives

K. Bobzin

B. Brommer

DVS - German Welding Society (DE)

F. Ernst

KS HUAYU AluTech GmbH (DE)

F. Gärtner

Helmut Schmidt University (DE)

T. Grund

RWTH Aachen University (DE)

KS HUAYU AluTech GmbH (DE)

Helmut Schmidt University (DE)

S. Hartmann obz innovation GmbH (DE)
H. Heinemann RWTH Aachen University (DE)

X. Huang TSCC Thermal Spray Committee of Chinese

Surface Engineering Association (CN)

J. Jerzembeck
T. Klassen

DVS - German Welding Society (DE)
Helmut Schmidt University (DE)

W. Krömmer The Linde Group (DE)

T. Lampke Chemnitz University of Technology (DE)

T. Linke Nemak Dillingen GmbH (DE)
E. Lugscheider RWTH Aachen University (DE)
H. Maier Leibniz University (DE)

G. Mauer Forschungszentrum Jülich GmbH (DE)

K. Möhwald Leibniz University (DE) M. Nabavi Oerlikon Metco AG (CH)

K. Nassenstein GTV Verschleißschutz GmbH (DE)
M. Öte Schaeffer Technologies AG & Co. KG (DE)

F. Prenger Grillo-Werke AG (DE)

C. Rupprecht Technische Universität Berlin (DE)
F. Schreiber DURUM Verschleiss-Schutz GmbH (DE)
F. Tiggemann Flowserve Flow Control GmbH (DE)
W. Tillmann TU Dortmund University (DE)
R. Vaßen Forschungszentrum Jülich GmbH (DE)

C. Wasserman

S. Weinreich

W. Wietheger

TeroLab Surface Group SA (CH)

DVS - German Welding Society (DE)

RWTH Aachen University (DE)

Technical Chairs

K. Bobzin RWTH Aachen University, Primarily Responsible (DE)

R. Lima National Research Council (CA) (US)

ASM/TSS Representatives

S. Fowler-Hutchinson SAINT-GOBAIN CERAMICS-SGP (US) E. Irissou National Research Council (CA)

C. Kay ASB Industries (US)

H. Koivuluoto Tampere University of Technology (FI)

J. Koppes TST Coatings (US)
K. Laul Delta Airlines (US)
A. McDonald University of Alberta (CA)
C. Moreau Concordia University (CA)

K. Shinoda National Institute of Advanced Industrial Science

and Technology (JP)

K. Sridharan University of Wisconsin (US)
A. Vackel Sandia National Laboratories (US)
J. Veilleux Universite de Sherbrooke (CA)

J. Villafuerte Centerline (CA)

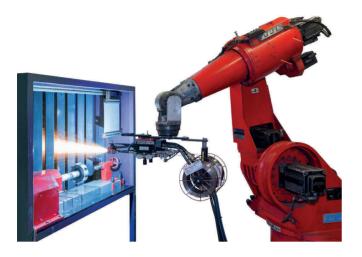
Endorsing Sponsors

Asian Surface Technologies, PTE. Ltd (SG) · BIL Belgisch Instituut voor Lastechniek (BE) · CEREM/CEA (FR) · Commission of the European Community (BE) · DGO – Deutsche Gesellschaft für Galvano- und Oberflächentechnik e. V. (DE) · DGM – Deutsche Gesellschaft für Materialkunde e. V. (DE) · DKG – Deutsche Keramische Gesellschaft e. V. (DE) · DVS – Research Association (DE) · GTS – Gemeinschaft Thermisches Spritzen e.V. (DE) · International Thermal Spray Association (US) · Japan Thermal Sprayers Association (JP) · JTSS – Japanese Thermal Spray Society (JP) · TSSEA – Thermal Spraying & Surface Engineering Association (GB) · TWI – The Welding Institute (GB) · VDI – Verein Deutscher Ingenieure (DE) · VTS – Vereniging voor Thermische Spuittechnieken (NL) · ZMB – Zentrum Metallische Bauweisen e. V. RWTH Aachen (DE)

DURUM VERSCHLEISS-SCHUTZ GMBH

Carl-Friedrich-Benz-Str. 7, 47877 Willich, Germany Tel.: +49 (0) 2154 4837 0, Fax: +49 (0) 2154 4837 78 info@durum.de, www.durmat.com





Thermal Spray Materials:

QUALITY makes the **DIFFERENCE**

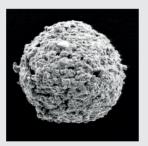
DURUM provides high performance welding and surfacing wires and powders and is a global market leader in the supply of specialized overlaying consumables that can be applied by a range of processes.

Our SOLUTIONS

Today we have a world-class solution, that outperforms competitive products in the market, for every aspect of wear that is typically encountered throughout the industry.



EquipmentPlasma-Powder-Welding
Arc Spraying



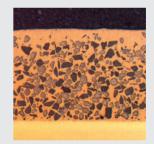
HVOF / HVAF Flame Spraying (FLSP) Plasma Transfered Arc (PTA)

Powders



Twin Arc Spraying (TWAS) Laser Cladding

Flux-Cored Wires



Spray & Fuse
Powders
Torches





PLC-controlled Equipment

Our latest generation of the PLC-controlled arc-spray system DUSPRAY 450 and PTA-welding system DURWELD 300 T - PTA offer a wide range of new features for demanding applications. The new generation can be operated manually or be integrated or combined with other peripherals. Ease of operation is guaranteed by the new HMI-mobile interface and user-friendly design. State-of-the-art power sources and advanced integrated features will help you increase your coating quality.

POSTER SESSION / INDUSTRIAL FORUM / THERMAL SPRAY IN A NUT SHELL

Poster Session

During the ITSC 2022 event a Poster Session will be held.

Poster Session during the Exhibitor Networking Reception

Wednesday, May 4, 2022, 18:00, ACV, Hall X2

The poster presenters will be available for discussion in the Poster area scheduled as follows:

Wednesday, May 4, 2022, 12:30 – 14:00 (18:00 during the Exhibitor Networking Reception)

Thursday, May 5, 2022, 12:40 – 13:40 Friday, May 6, 2022, 12:40 – 13:40

In addition further contacts with the authors can be arranged.

The complete Poster Session program of ITSC will be available online at the beginning of March 2022 – see: www.dvs-ev.de/itsc2022

Thermal Spray in a Nut Shell

ACV, Hall K2

A new session **Thermal Spray in a Nut Shell** will be held on the first day of the conference, which will cover the application of thermal spraying and its significance. Expo only attendees are also welcome to this session.

Hours:

Wednesday May 4, 2022, 10:50 - 15:20

Industrial Forum

ACV. Hall K2

The Industrial Forum will take part during ITSC 2022 in the ACV, Hall K2. Invited companies will present on industry related topics and products during conference and exposition hours.

All presentations are given in English and are limited to 20 minutes including guestion & answer (Q&A).

Beside the ITSC conference registrants, also all Expo only attendees are invited to visit the Industrial Forum.

Forum Hours:

Thursday, May 5, 2022, 09:00 – 17:20 Friday, May 6, 2022, 09:00 – 12:40

The complete Industrial Forum program of ITSC will be available online at the beginning of March 2022 - see: www.dvs-ev.de/itsc2022

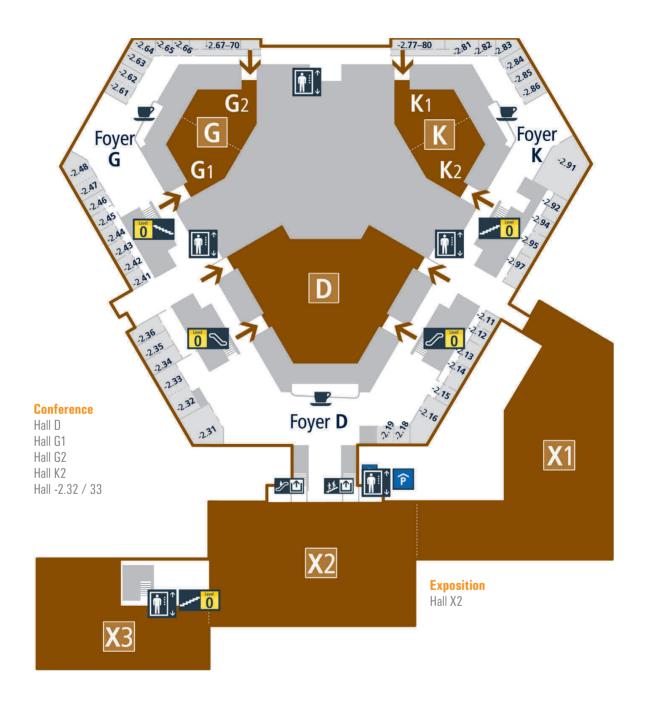




Visit us at Booth #184



PLAN AUSTRIA CENTER VIENNA





CALL FOR PAPERS NOW OPEN!

NEXT-GENERATION THERMAL SPRAYING FOR FUTURE SURFACES

MAY 22-25, 2023 | QUEBEC CITY, CANADA

The International Thermal Spray Conference (ITSC) is the premier event for thermal spray professionals, attracting global innovators, influencers, and decision makers from around the world. Don't miss your opportunity to showcase your research and innovative work with colleagues and peers from across the thermal spray industry.

The ITSC Organizing Committee is encouraging abstract submissions in the following symposiums:

- Aerospace and Industrial Gas Turbines (IGTs)
- Fundamentals/Research & Development
- Thermal Spray Applications
- Young Professionals Competition

For a full list of session topics, visit its cevent.org

SUBMISSION DEADLINE: SEPTEMBER 25, 2022

Plan today to join your colleagues from industry, academia, and government at ITSC. Quebec City will be the perfect destination to mix ITSC business with pleasure. Be sure to add a little extra time to explore this treasured UNESCO world heritage site, which is walkable and safe. Stroll the cobblestone streets of the only fortified city north of Mexico and explore its gorgeous outdoors nearby.



EXPOSITION

Concurrent with the conference, the ITSC 2022 Exposition, organized by the TSS – Thermal Spray Society, ASM International, will take place in the ACV, Hall X2.

Kick-off ITSC 2022 Exposition

Wednesday, May 4, 2022, 12:30, ACV, Hall X2

Exhibitor Networking Reception and Poster Session

Wednesday, May 4, 2022, 18:00, ACV, Foyers, Hall X2

sponsored by:



Exposition Hours

Wednesday, May 4, 2022, 12:00 – 18:00 (followed by the Exhibitor Networking Reception)

Thursday, May 5, 2022, 10:00 – 16:00 Friday, May 6, 2022, 10:00 – 14:00

Further Information:

Exhibitor Application, Exhibitor Prospectus, Exhibitor Layout Map, Current Exhibitor List are available: www.dvs-ev.de/itsc2022

Expo Only

Please use the online registration for "Expo only": www.dvs-ev.de/itsc2022

CORPORATE SUPPORTERS



DURUM Verschleiss-Schutz GmbH, Germany



Green Belting Industries Limited, United States of America



Lineage Metallirgical, United States of America



MAY 4TH - 6TH

COMING SOON



NEW!

Discover our latest gun innovation at **stand 118**

COATING SOLUTIONS



EXHIBITOR LIST

(Status: April 11, 2022)

EXHIBITOR	BOOTH NO.	EXHIBITOR B	OOTH NO
AIMTEK, United States of America	152	Medicoat AG, Switzerland	10
Ardleigh Minerals, Inc., United States of America	120	Metallizing Equipment Co. Pvt. Ltd., India	11
C&M Technologies GmbH, Germany	129	Mettech Corp., Canada	14
CenterLine Supersonic Spray Technologies, Canada	145	Millidyne, Finland	13
CGS Plasmatechnik UG, Germany	173	Oerlikon Metco, United States of America	11
DeWal, a division of Rogers Corporation, United States of A	America175	Oseir Oy, Finland	10
DIAMANT Metallplastic GmbH, Germany	126	Polymet Corporation, United States of America	15
DURUM Verschleiss-Schutz GmbH, Germany	148	Powder Alloy Corporation, United States of America	12
DVS e. V. / DVS Media GmbH, Germany / ASM Internation JTST, United States of America		Printing International NV, Belgium	
ELMA-TECH GmbH, Germany	125	Progressive Surface, Inc., United States of America	
Fraunhofer IWS, Germany	188	SAINT-GOBAIN, United States of America	
Global Advanced Metals, United States of America	160	Salloytech, Poland	11
Green Belting Industries Limited, United States of America	130	Sentes-BIR Metal Powders, Turkey	
GTS e. V., Germany	170	Seram Coatings AS, Norway	
GTV Verschleißschutz GmbH, Germany	127	SMS group GmbH, Germany	
Guhlfi Consulting AG Switzerland, Switzerland	104	SprayWerx Technologies Inc., Canada	
Imerys, Austria	128	Surface Coating Solutions SRL, Italy	17
Impact Innovations GmbH, Germany	122	Taconic International LTD., Ireland	15
LaserBond Ltd., Australia	162	TECNAR Automation Ltd., Canada	13
Lincotek, Italy		VRC Metal Systems, United States of America	18
Lineage Metallurgical, United States of America		Zhengzhou Lijia Thermal Spray Machinery Co., Ltd., P.R. Chin	ıa10
LM Group Holdings Inc., United States of America		Zuzhou Topper Cemented Carbide Materials Co., Ltd., P.R. Ch	ina11
LUNOVU GmbH, Germany		Zierhut Messtechnik GmbH, Germany	10

Global Tungsten & Powders





Whatever you create out of tungsten, be sure to start with the best powders on the market.

Whether for additive manufacturing, hard metals industry, oil/gas, tungsten metal, or tungsten heavy alloy applications, Global Tungsten & Powders offers the perfect powder blends. Our laboratories are equipped with the latest technologies allowing material measurements down to the atomic level.

Additionally, GTP recycles any tungsten containing scrap you may have on

hand. Benefit from our long standing expertise, especially in utilizing the zinc process for the recycling of tungsten carbide in industrial scale.

Talk to our experts to see how we can help.

GTP has

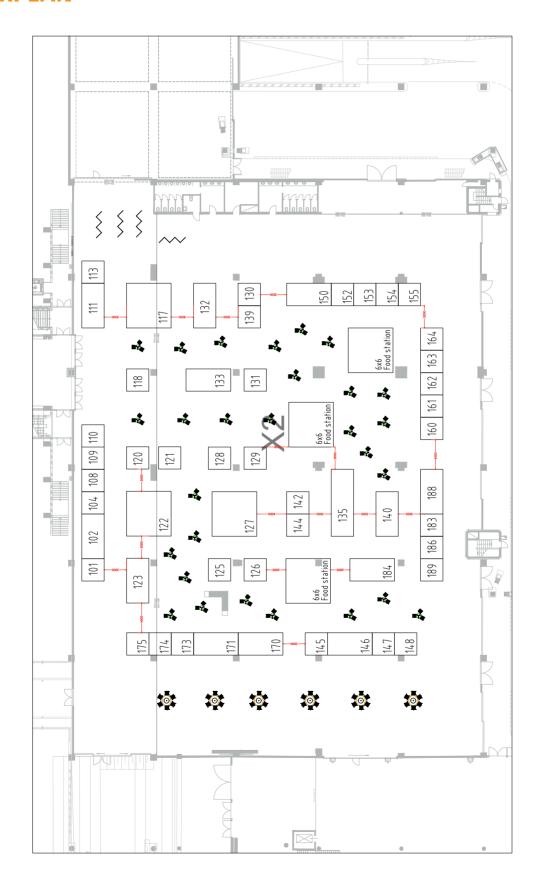
discontinued the

manufacturing of thermal
manufacturing but offers



www.globaltungsten.com

FLOORPLAN





HALL OF COATINGS

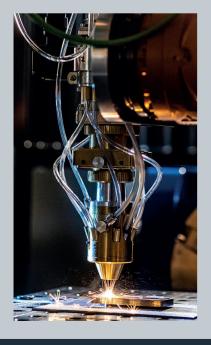
State-of-the-art equipment for the highest demands











YOUR ADVANTAGES OF THE NEW GTV R&D DEPARTMENT AT A GLANCE

Equipment according to GTV-State-Of-The-Art-Standard:

- Grit blasting station
- · Laboratory for metallographic analysis
- Laboratory for powder analysis laser diffraction, sieve analysis
- Laser cladding and AM stations laser power up to 22 kW!
- MEGA-TS station for component handling up to 6 t.

- Powder and wire flame spray station acetylene supply up to 2.5 bar!
- Plasma and arc spray station APS up to 6 anodes
- RSW station (bore hole coating)
- More over a highly motivated and competent R&D team consisting of 12 employees, who support and accompany our customers with further innovations



GTV Verschleißschutz GmbH Vor der Neuwiese 7 D-57629 Luckenbach, Germany

- **+49 2662 9576 0**
- @ office@gtv-mbh.de
- www.qtv-mbh.de



SOCIAL EVENTS PROGRAM / AWARDING

Opening of ITSC 2022 with Plenary Lecture and Awards Presentation

Wednesday, May 4, 2022, 09:00, ACV, Hall D

- Welcome
- Plenary Lecture
- TSS Hall of Fame / TSS President's Award

Session "Young Professionals" with Awards Presentation

Wednesday, May 4, 2022, 15:40, ACV, Hall D

- ITSC Best Paper Award
- JTST Best Paper Award
- Oerlikon Metco Young Professionals Award

All awards will be presented at the end of this session.

Exhibitor Networking Reception

Wednesday, May 4, 2022, 18:00, ACV, Hall X2 All registrants are invited by TSS/ASM for a snack and drinks.

Social Event Evening in the "Heuriger" (winery event)

Thursday, May 5, 2022, 19:00, Heuriger 10er Marie, Ottakringer Str. 222-224, 1160 Wien (Vienna), Austria

Join us Thursday at the Social Event Evening in the Heuriger. Heuriger is in Austria the locality, where wine is served. 10er Marie is a tavern, temporary serving of local drinks, young and old wine, but also must (beer will also be served!). Enjoy also typical Austrian food and music in an extraordinary ambience. The Social Event Evening is included with a Complete Registration. Additional tickets are limited, but can be ordered with the registration form (first-come-first-served basis).

Transportation by bus:

Departure: 18:30, ACV, Wagramer Str. 5, Airport bus terminal, 1220 Wien (Vienna), Austria

Return: ca. 22:30, ACV

Registrants should be present 10 minutes before departure.



Surface & Brazing Technologies at Höganäs

- >> Sustainable solutions
- >> High performance components with our materials
- >> Innovative coatings and joining technologies



PRESENTING AUTHORS, POSTER PRESENTERS and SESSION CHAIRS ITSC 2022

(Status: April 11, 2022)

A		Delloro, F	MINES ParisTech, France
Abdulgader, M	University of Dortmund, Germany		UTBM, France
Aissou, T	Sherbrooke University, Canada	Dokhanchi, S	RWTH Aachen University, Germany
	Concordia University, Canada		Concordia University, Canada
	University of Tsukuba, Japan	Dosta, S	University of Barcelona, Spain
	University of Barcelona, Spain	Du. K	BGRIMM Technology Group, P.R. China
Alebrahim, E	Concordia University, Canada		37 - 37
Alanhuri A	Heriot Watt University, United Arab Emirates	E	
Ardeshiri Lordeiani A	Politecnico di Milano, Italy	Elsenhera A	Helmut Schmidt University of the Federal Armed
Arhami, F	Concordia University, Canada	210011301 9, 7 1	Forces, Germany
В		F	
	Rowan University, United States of America	Fan. N.	Trinity College Dublin, Ireland
	Schaeffler Technologies AG & Co. KG, Germany	Feldhaus D	Northwest Mettech Corp., Canada
Banherifard S	Politecnico di Milano, Italy		Technical University of Darmstadt, Germany
Rakan F	Forschungszentrum Jülich GmbH, Germany		
	Oerlikon Metco AG, Switzerland	G	
	University of Dortmund, Germany	Gärtner F	Helmut Schmidt University of the Federal Armed
Reccard R	LUNOVU GmbH, Germany	Gui (1101, 1	Forces, Germany
Reck F	BLC Lasercladding GmbH, Germany	Gan S	UTBM, France
Rever S	ArianeGroup GmbH, Germany	Garrido R	University of Barcelona, Spain
	SAINT-GOBAIN COATING SOLUTIONS, France	Gildersleeve F	Stony Brook University, United States of America
	Baumann Plasma Flame Technic AG, Switzerland		
	RWTH Aachen University, Germany	dokinola, N	Federation
	University of Modena and Reggio Emilia, Italy	Gor S	RWTH Aachen University, Germany
	Technische Universität Berlin, Germany		Safe Hold Consulting, United States of America
			Chemnitz University of Technology, Germany
	Fraunhofer IWS, Germany		Medicoat AG, Switzerland
	University of Modena and Reggio Emilia, Italy		ETH Zürich University, Switzerland
			MINES ParisTech, France
	RWTH Aachen University, Germany	Cuo D	University of Ottawa, Canada
Durnich C	Lincotek Rubbiano S.p.A., Italy	Guu, D	Ulliversity of Ottawa, Gallaua
Dui Sicii, 3	Lilicotek Hubbiano S.p.A., Italy	н	
C.		Hambrock C	voestalpine Stahl GmbH, Austria
Candidato R		Hankirk M	
	Philipping	Hartmann C	obz innovation gmbh, Germany
Colocto G	MINES ParisTech, France	Hauar M	Fraunhofer IGP, Germany
	IRCER, France		Xiris Automation Inc., Canada
Chromik R			University of Ottawa, Canada
			Treibacher Industrie AG, Austria
		Long D	RWTH Aachen University, Germany
	Fraunhofer IKTS, Germany		Oerlikon Metco Woka GmbH, Germany
	Thermal Spray Innovations, Austria / Northwest		MTU Aero Engines AG, Germany
Guify, IV		neyuan Astaraee, A	Politecnico di Milano, Italy
	Mettech Corporation, Canada		VRC Metal Systems LLC, United States of America
n		пиннанн, С	Rybak + Hofmann rhv Technik GmbH + Co. KG,
	University of Toronto Conado	Hohnon T	Germany
			SMS group GmbH, Germany
Derks, А	GSI mbH, NL SLV Duisburg, Germany	поиакоvа, 5	VZU Plzen s.r.o., Czech Republic

Huang, C	Helmut Schmidt University of the Federal Armed Forces, Germany
Huher B	Germany
	ETH Zürich University, Switzerland
,,	
I	
Ider, M	Technische Universität Berlin, Germany
_	
	Tampere University, Finland
	RWTH Aachen University, Germany
	University of Toronto, Canada
	DVS – German Welding Society, Germany Université de Lille, France
	Tecnar Automation Ltée, Canada
	Forschungszentrum Jülich GmbH, Germany
	RWTH Aachen University, Germany
	Solution Spray Technologies, United States of America
	Technische Universität Berlin, Germany
	Voith Paper Rolls GmbH & Co. KG, Austria
oungkiddo, m	Volur rupor riono dinistr di doi: Rd, Auduria
	RWTH Aachen University, Germany
	Pallas GmbH & Co. KG, Germany
	Rowan University, United States of America
	Monitor Coatings-Castolin Eutectic, Great Britain
	VTT Technical Research Centre of Finland Ltd., Finland
	Concordia University, Canada
	Wroclaw University of Science and Technology, Poland
	SAINT-GOBAIN COATING SOLUTIONS, France
Killinger, A	University of Stuttgart, Germany
Klassen, I	Helmut Schmidt University of the Federal Armed
Knoch M	Forces, Germany Plasmatic Franken GmbH, Germany
Knivulunto H	Tampere University, Finland
Koller M	Czech Academy of Sciences, Czech Republic
	Impact Innovations GmbH, Germany
	Ural Federal University, Russian Federation
	RWTH Aachen University, Germany
Kovarik, O	Czech Technical University, Czech Republic
	The Linde Group, Germany
	Lavrentyev Institute of Hydrodynamics SB RAS,
	Russian Federation
Kummer, H	obz innovation gmbh, Germany
	DIAMANT Metallplastic GmbH, Germany
	Technische Universität Dresden, Germany
Kusuran, A	UTBM, France

L	
	National Research Council Canada, Canada
	Chemnitz University of Technology, Germany
	Oseir Oy, Finland
	Wroclaw University of Science and Technology, Poland
	Cummins Inc., United States of America
	University of Ottawa, Canada
	Ajou University, Republic of Korea
	National Research Council Canada, Canada
	University of Nottingham, Great Britain
Leshchynsky, V	University of Windsor, Canada
Li, C	Xi'an Jiaotong University, P.R. China
Li, W	UTBM, France
	McGill University, Canada
Lima, R	National Research Council Canada, Canada
	Oseir Ltd., Finland
	Chemnitz University of Technology, Germany
List, A	Helmut Schmidt University of the Federal Armed
	Forces, Germany
Liu, S	Forces, Germany UTBM, France
	BGRIMM Technology Group, P.R. China
	Trinity College Dublin, Ireland
Lynam, A	University of Nottingham, Great Britain
M	
	Curtiss-Wright, United States of America
	RWTH Aachen University, Germany
	Leibniz University, Germany
	University of Waterloo, Canada
Mathiyalagan, S.	University West, Sweden
	Valmet Technologies Oy, Finland
Mauer, G	Forschungszentrum Jülich GmbH, Germany
Meghwal, A	Swinburne University of Technology, Australia
Melzer, A	Grillo-Werke AG, Germany
Meng, Y	Tohoku University, Japan
Meyer, A	Fraunhofer IKTS, Germany
Mohr, A	Deutsche Edelstahlwerke Specialty Steel GmbH
	& Co. KG, Germany
	University of Toronto, Canada
Msolli, S	UTBM, France
	Glen Dimplex Deutschland GmbH, Germany
Musalek, R	
N	
	Oerlikon Metco AG, Switzerland
	University of Alberta, Canada
	GTV Verschleißschutz GmbH, Germany
	Leibniz University Hannover, Germany
•	1



Nikbakht, R	University of Ottawa, Canada
0 .	JNational Research Council Canada, Canada
	Technical University Darmstadt, Germany
	Schaeffler Technologies AG & Co. KG, Germany
Ogunbadejo, A	University of Alberta, Canada
Oliveira Da Silva, F	RTreibacher Industrie AG, Austria
Otsuka, Y	Nagaoka University of Technology, Japan
	Northeastern University, United States of America
, .	,
P	
	Technische Universität Berlin, Germany
	University of Alberta, Canada
	University of Toronto, Canada
	TECHNOGENIA/ENISE, France
	Jade University of Applied Sciences, Germany
	MIRTEC S.A., Greece
	University of Toronto, Canada
	RWTH Aachen University, Germany
	UTBM, France
	Grillo-Werke AG, Germany
	Chemnitz University of Technology, Germany
Pukasiewicz, A	Universidade Tecnológica Federal do Paraná, Brazil
-	
	Concordia University, Canada
	University of Toronto, Canada
	EUROMAT GmbH, Germany
	University of Ottawa, Canada
	Technische Universität Dresden, Germany
Reisel, G	Oerlikon Metco WOKA GmbH, Germany
Ribeiro da Cruz Alv	ves, JStony Brook University, United States of America
Richter, P	Impact Innovations GmbH, Germany
Rincon Romero, A.	University of Nottingham, Great Britain
Rippen, H	HR Consulting GmbH, Germany
Rodriguez Diaz, M.	Leibniz University Hannover, Germany
	University of Modena and Reggio Emilia and
	Federal University of Technology – Paraná, Italy
Roth. M.	GfE Fremat GmbH, Germany
	Centre de Metallurgie du Quebec, Canada
	National Institute of Technology Durgapur, India
	Dycomet Europe b.v., The Netherlands
	Technische Universität Berlin, Germany
παρρισσιπ, σ	
S	
	SHINSHU University, Japan
	Guhlfi Consulting AG Switzerland, Switzerland
	Stony Brook University, United States of America
Sanchez, J	University of Barcelona, Spain

т ару, к	ILGIINUULINIA/ LINISL, I Idille		
	Jade University of Applied Sciences, Germany		National Technical University of Athens, Greece
	MIRTEC S.A., Greece		University of Stuttgart, Germany
	University of Toronto, Canada		RWTH Aachen University, Germany
	RWTH Aachen University, Germany	Scarcello, G	Centro Sviluppo Materiali S.p.A., Italy
Planche, M	UTBM, France		RWTH Aachen University, Germany
	Grillo-Werke AG, Germany	Schein, JU	niversity of the Federal Armed Forces Munich, Germany
Preuß, B	Chemnitz University of Technology, Germany	Schlaefer, T	Laserbond, Australia
Pukasiewicz, A	Universidade Tecnológica Federal do Paraná, Brazil	Schmidt, M	Jade University of Applied Sciences, Germany
		Schreiber, F	DURUM Verschleiss-Schutz GmbH, Germany
		Schulz, M	RWTH Aachen University, Germany
Rahman, M	Concordia University, Canada		Oerlikon Surface Solutions, Switzerland
Ramaraju, R	University of Toronto, Canada	Segondy, S	Chimie ParisTech (IRCP), France
Rass, I	EUROMAT GmbH, Germany	Shahien, M	
Razavipour, M	University of Ottawa, Canada		and Technology, Japan
Reif, M	Technische Universität Dresden, Germany	Sharma, A	and Technology, Japan IT Carlow, Ireland
Reisel, G	Oerlikon Metco WOKA GmbH, Germany	Shinoda, K	
Ribeiro da Cruz Alves,	, JStony Brook University, United States of America		and Technology, Japan
Richter, P	Impact Innovations GmbH, Germany	Silvello, A	University of Barcelona, Spain
	University of Nottingham, Great Britain		Impact Innovations GmbH, Germany
Rippen, H	HR Consulting GmbH, Germany	Sokolowski, P	Wroclaw University of Science and Technology, Poland
Rodriguez Diaz, M	Leibniz University Hannover, Germany	Sordelet, D	Caterpillar Inc., United States of America
Rossi Gehlen, L	University of Modena and Reggio Emilia and		KVT Kurlbaum AG, Germany
	Federal University of Technology – Paraná, Italy	Stittgen, T	ponticon GmbH, Germany
Roth, M	GfE Fremat GmbH, Germany	Suhonen, T	VTT Technical Research Centre of Finland, Finland
Rouget, G	Centre de Metallurgie du Quebec, Canada		
Roy, S	National Institute of Technology Durgapur, India	T	
Rozema, K	Dycomet Europe b.v., The Netherlands	Tesar, T	
Rupprecht, C	Technische Universität Berlin, Germany	Testa, V	University of Modena and Reggio Emilia, Italia
		Thomas, G	Technische Universität Berlin, Germany
		Tiggemann, F	Flowserve Flow Control GmbH, Germany
Sakaki, K	SHINSHU University, Japan	Tillmann, W	University of Dortmund, Germany
Salito, A	Guhlfi Consulting AG Switzerland, Switzerland	Toma, F	Fraunhofer IWS, Germany
Sampath, P	Stony Brook University, United States of America		University West, Sweden
Sanchez, J	University of Barcelona, Spain	Trache, R	Treibacher Industrie AG, Austria
	Stony Brook University, United States of America		Treibacher Industrie AG, Austria



V	
	Sandia National Laboratories, United States of America
Varis, T	Tampere University, Finland
	Forschungszentrum Jülich GmbH, Germany
Venturoli, A	Lincotek Medical Trento, Italy
	UTBM, France
	Centerline Windsor Ltd., Canada
	Liquid Metal Group Holdings, United States of America
	GTV Verschleißschutz GmbH, Germany
Vostrak, M	VZU Plzen s.r.o., Czech Republic
W	
	BGRIMM Technology Group, P.R. China
	Xi'an Jiaotong University, P.R. China
Wang, Z	Trinity College Dublin, Ireland
Wank, A	GTV Verschleißschutz GmbH, Germany
Weis, S	University of Applied Science Zwickau, Germany
Wietheger, W	RWTH Aachen University / KVT Kurlbaum AG, Germany
Wu, H	Helmut Schmidt University of the Federal Armed

Χ	
	Zhejiang Ocean University, P.R. China
Υ	
Yalcinyüz, B	Technische Universität Berlin, Germany UTBM, France
Yu, K Yu, P	National Research Council Canada, Canada Trinity College Dublin, Ireland
Yuan, K	BGRIMM Technology Group, P.R. China
Z	
	TWI Ltd., Great Britain
Zhang, T	UTBM, France
Zhao, L	RWTH Aachen University, Germany
	Forschungszentrum Jülich GmbH, Germany
	Zhengzhou University, P.R. China
	University of Limoges, France
	Zierhut Messtechnik GmbH, Germany
Zimmermann, S	University of the Federal Armed Forces Munich,
	Germany

GENERAL INFORMATION

NOTE FROM THE ORGANIZER

DVS and ASM are glad to welcome you in Vienna. For your safety, we adapted our hygiene protection concept to the currently valid Corona Protection Ordinance (here: Vienna, Austria).

The most important information for events in Austria can still be found on: https://www.vienna.convention.at/en/event-planning/covid-19/update-meetings-362408

We will also keep you informed on the ITSC website (www.dvs-ev.de/itsc2022)!

VENUE / REGISTRATION

ITSC 2022 Venue

Austria Center Vienna (ACV)
Hall D, Hall G1, Hall G2, Hall K2, Hall -2.32/33, Hall X2 (Level -2)
Bruno-Kreisky-Platz 1
1220 Wien (Vienna), Austria

Information

The conference will take place as a discussion event. A Time Schedule with Session Information can be found on page 08. The complete program of ITSC 2022 (date and time for oral presentations, poster presentations, presentations in the Industrial Forum and in the session Thermal Spray in a Nut Shell, Presenting Authors, Poster Presenters, Session Chairmen) will be available online at the beginning of March 2022 – see: www.dvs-ev.de/itsc2022

The language of ITSC is English.

Complete Registration includes:

- Plenary Program
- 3-Day Technical Conference
- 3-Day Exposition
- Coffee Breaks
- Lunch Breaks
- One Conference Proceedings USB stick (with abstract book)
- Exhibitor Networking Reception
- One Social Event Evening Ticket (Winery Event in the "Heuriger")

Minimum Registration includes:

- Plenary Program
- 3-Day Technical Conference
- 3-Day Exposition
- Coffee Breaks
- Lunch Breaks
- Exhibitor Networking Reception

Day-Ticket possible!



Exhibitor Staff (for conference attendance)

Please look at the Registration Form: www.dvs-ev.de/itsc2022

Advance Registration

E-mail, fax

Send your complete registration form to:

DVS – German Welding Society P.O. Box 10 19 65 40010 Düsseldorf / Germany P +49 211 1591-302/-303 F +49 211 1591-300 tagungen@dvs-hq.de

Online

You can also use the online registration: www.dvs-ev.de/itsc2022 (will be closed by April 23, 2022)

All information and details on ITSC 2022 are on the website: www.dvs-ev.de/itsc2022

Registration without payment will not be processed. If your registration form and payment have not been received by DVS by April 1, 2022 you will pay a late registration fee of EUR 150. This applies also to on-site registration.

A confirmation will be sent to you within 10 business days of receiving your registration and payment.

Payment

By credit transfer:

DVS – German Welding Society Deutsche Bank AG, Düsseldorf

IBAN-code: DE96 3007 0010 0155 6844 00

BIC-code: DEUTDEDDXXX

Any banking charges which may be incurred will be borne by the attendees. Keyword for credit transfer (please do not forget): ITSC 2022, name of

By credit card:

MasterCard, Visa, American Express (accepted)



Cancellations

Cancellations must be in writing to DVS by April 5, 2022. In case of cancellation after April 5, 2022 DVS will take a processing fee of EUR 200, after April 19, 2022 there is no refund.

On-Site Registration and Check-in at the Registration Desk

Registered attendees should check-in and collect their conference documents at the Registration Desk located in the ACV, Foyer D.

Opening Hours for the Registration Desk are as follows:

Tuesday, May 3, 2022, 14:00-17:00 Wednesday, May 4, 2022, 08:00-17:00 Thursday, May 5, 2022, 08:00-17:00 Friday, May 6, 2022, 08:00-14:00

EVENT DOCUMENTS

Technical Program

The complete Technical Program (oral and poster presentations) will be provided at the Registration Desk.

Conference Proceedings USB stick (with abstract book)

The Conference Proceedings USB stick will be produced in advance with all illustrations and tables. The conference USB stick is included with the complete registration. You will receive it at check-in. Additional USB sticks can be bought at the Registration Desk.

CATERING

Morning/Afternoon Coffee Breaks

During the coffee breaks (not during lunch break) coffee and tea will be served free of charge.

Lunch Breaks

During the lunch breaks a snack will be served free of charge for conference attendees (vouchers will be distributed with the conference documents).

During the event fresh water will be provided with water dispensers.

TRANSPORTATION / PARKING

Transportation to Austria Center Vienna (ACV), Bruno-Kreisky-Platz, 1220 Wien (Vienna), Austria

By taxi (from Vienna Airport):

The airport is located directly on the A4 motorway. It takes around 25 minutes to reach the Austria Center Vienna by taxi (price: around EUR 36)

By train/metro (from Vienna Airport):

There are several possibilities to reach the ACV (City Airport Train CAT, Rail S-Bahn commuter railway (S7), bus: airport shuttle

For more information:

https://www.acv.at/en/visit/arriving/

Parking

The ACV provides covered, secure parking for delegates. For more information:

https://www.acv.at/en/visit/arriving/

ENTRY TO AUSTRIA

Latest Information on the Coronavirus

Please inform yourself before planning your stay in Austria: https://www.vienna.convention.at/en/event-planning/covid-19

Travel Certificate A1 of the Employer

It is necessary for employees in the EU who undertake a business trip to another EU country (here: Austria) to carry a travel certificate (A1) from their employer on the business trip. Please inform yourself in your country.

VISA

Attendees are requested to check with the Austrian consulate in their home country or with their travel agency for visa requirements. It is the responsibility of the attendee to obtain a visa in advance.

If you need an invitation letter please contact: tagungen@dvs-hg.de For more information regarding entry permit to Austria, please visit: https://www.bmeia.gv.at/en/

TIME

Central European Time (CET); Standard-Difference UTC + 1:00h

TIPS FOR VIENNA

Weather

Vienna's climate is classified as warm and temperate. Vienna has a significant amount of rainfall during the year. This also applies to the driest month. The temperature here averages 9.9° C. 623 mm of precipitation fall on average within a year.

Shopping

Shopping in Vienna is a very versatile pleasure. In addition to traditional department stores and major shopping streets, there are also a large number of small shops and boutiques that can easily compete with international competition. We definitely want to recommend the Vienna Naschmarkt to all flea market friends. There you will find a lot of curiosities and can dive deep into the Viennese soul.

Electricity

The voltage Austria is 230 volts. Travelers are advised to bring a power converter and an adapter.

HOTEL INFORMATION

Hotel reservation can be made online. Please refer to: www.dvs-ev.de/itsc2022 (Accommodation, Booking Form)

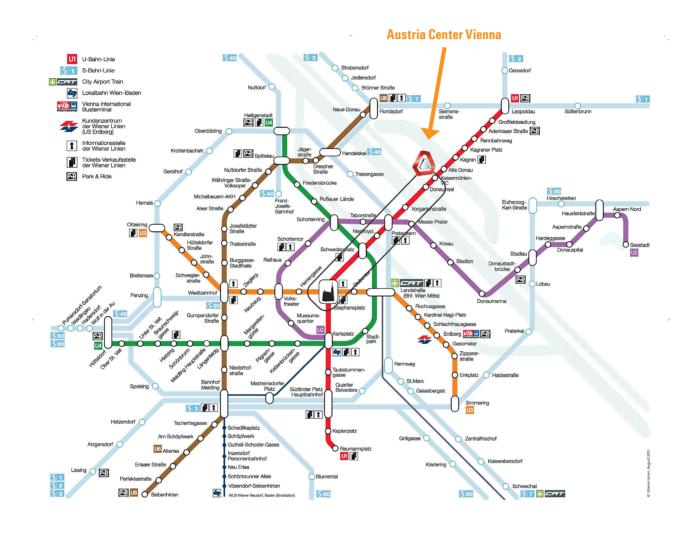
Our recommendation:

Arcotel Kaiserwasser next to the ACV.

Any other hotel platform is also possible.



AUSTRIA CENTER VIENNA (ACV)







THERMAL SPRAY JOB SHOPS

Repairs for flight safety

To learn more about Green Belting Industries masking solutions, contact us.

www.greenbelting.com • info@greenbelting.com • 905.564.6712



