8th
International
Welding Symposium

Second Circular

16-18 November, 2008
Kyoto International Conference Center, Kyoto, Japan

8WS

Innovations in Welding and Joining
for
a New Era in Manufacturing

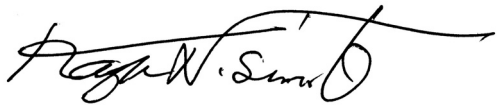
Organized by Japan Welding Society

Co-Sponsored by Osaka University Global COE Program
(Center of Excellence for Advanced Structural and Functional Materials Design)

Invitation

In the year 2008, the 8th International Symposium of the Japan Welding Society (8WS) on “Innovations in Welding and Joining for a New Era in Manufacturing” will be held on 16-18, November at Kyoto International Conference Center, Kyoto, Japan.
The Symposium aims to promote direct exchange of the latest scientific and technological information related to welding and joining to realize new innovations from the viewpoints of globally sustainable growth and many different human perspectives. It will also provide a good opportunity to discuss on the future and/or the strategy regarding R&D of materials processing and production systems, in order to further such developments in welding in industry.
The Japan Welding Society is very pleased to welcome you and hopes you to enjoy Kyoto which is a most beautiful city, harmonizing traditional and modern values.

Conference Chairman of the 8WS,
President of the JWS,



Kazutoshi NISHIMOTO

Scope

Welding and joining technologies are indispensable in the materials processing required for the manufactured products of the various industries of automotive, electronic devices, steel making, aerospace, shipbuilding, bridges, building construction, pipelines, chemical & nuclear plants, power generation, etc. New innovations in welding and joining need to be assessed from the viewpoints of globally sustainable growth and many different human perspectives. To realize such innovations, we need to apply new advanced scientific concepts to welding and joining processes. The aim of the conference is to further such developments in welding in industry.
The topics to be discussed include;

1. Science of welding and joining
2. Modeling and simulation
3. Visualization, understanding and control of phenomena
4. Advanced and promising future technologies
5. Quality, reliability and safety
6. Fitness for service and structural integrity assessment
7. Education, training and qualification of welder and welding engineer
8. Manufacturing for global sustainable development
9. Harmonizing the natural environment

Venue

The 8th International Symposium of the Japan Welding Society will be held at the Kyoto International Conference Center in Kyoto, Japan, during November 16-18, 2008. Kyoto is an ancient capital of Japan in which Japanese traditional culture still flourishes. Kyoto is a most beautiful city, harmonizing traditional and modern values, and is a most suitable site for the discussion of innovations in welding and joining technologies. We will welcome participants from all over the world to the 8WS.

Language

The official language of the symposium is English.

Registration

Please visit the symposium website (http://www.nta-aps.jp/8WS/). The registration is available through the web-pages.

Fees

	Before August 31, 2008	**After** August 31, 2008
Participant	60,000 JPY	70,000 JPY
Accompanying Person	5,000 JPY	10,000 JPY
Student	15,000 JPY	20,000 JPY
Technical Visit A Technical Visit B Technical Visit C Technical Visit D	5,000 JPY/one -visit	

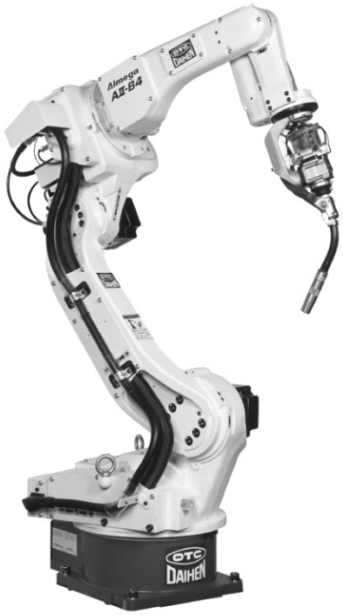
In the event of cancellation of registration, written notification should be sent to *Nippon Travel Agency* (mcs_center@nta.co.jp). The amount of refund for your payment will be dependent on the day of your notification. Please check the symposium website (http://www.nta-aps.jp/8WS/).

Hotel Reservations

The executive committee of the 8WS has negotiated special room rates with different hotels close to the symposium venue or in down town Kyoto for delegates. The accommodation will be allocated on the first come first service basis. Please visit the symposium website (http://www.nta-aps.jp/8WS/). The hotel reservation with the special room rate is available through the web-pages.

Schedule of the Symposium (Tentative)

Technical sessions will be planned to present more than 280 papers from all over the world, which includes invited papers by internationally well-known research experts in various fields, and also the latest papers with poster presentations. All papers will be based on a rigorous review for presentation. The proceedings will be distributed to all attendees during the 8WS.



	Sun 16 Nov				
Room	Room J	Room K	Room C1	Room C2	Room D
Session Name					
09:00-09:15					
09:15-09:30					
09:30-09:45					
09:45-10:00					
10:00-10:15	Opening Ceremony at Room A				
10:15-10:30					
10:30-10:45	Keynote Lecture 1 at Room A				
10:45-11:00					
11:00-11:15					
11:15-11:30	Keynote Lecture 2 at Room A				
11:30-11:45					
11:45-12:00					
12:00-13:30	Lunch				
Session Name	Smart Process	Distortion & Residual stress	Laser Welding	Metallurgy & Weldability1	Special A-1
13:30-13:45	JI-01	KI-01	C1I-01	C2I-01	
13:45-14:00					
14:00-14:15	JO-01	KO-01	C1O-01	C2O-01	
14:15-14:30	JO-02	KO-02	C1O-02	C2O-02	
14:30-14:45	JO-03	KO-03	C1O-03	C2O-03	
14:45-15:00	Coffee Break				
15:00-15:15					
15:15-15:30	JI-02	KI-02	C1I-02	C2I-02	
15:30-15:45					
15:45-16:00	JI-03	KI-03	C1I-03	C2I-03	
16:00-16:15					
16:15-16:30	JO-04	KO-04	C1O-04	C2O-04	
16:30-16:45	JO-05	KO-05	C1O-05	C2O-05	
16:45-17:00	JO-06	KO-06	C1O-06	C2O-06	
17:00-17:15	JO-07	KO-07	C1O-07	C2O-07	
17:15-17:30	JO-08	KO-08	C1O-08	C2O-08	
17:30-18:00	Break				
18:00-20:00	Reception at Room Sakura				

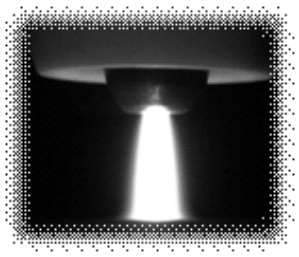
Special Sessions

Special A: Leading Edge of Preventive Maintenance & Repair Technology for Safe and Long Operation of Nuclear Power Station

Special B: Pipeline Technology Now and Then

Special C: Recent Progress in Welding and Joining Technologies for Automotive Manufacturing

Special D: Welding Simulation Technology



	Mon 17 Nov				Tue 18 Nov			
Room	Room K	Room C1	Room C2	Room D	Room K	Room C1	Room C2	Room D
Session Name	Micro& Interfacial Bonding	Special B-1	Arc Physics	Special A-2	Strength & Fracture	Special C-1	Arc Welding & Robotics1	FSW2
09:00-09:15	KI-04		IIW Comm.XII SG212 Inter. Meet.		KI-08		IIW Comm.XII SG212 Inter. Meet.	DI-03
09:15-09:30								
09:30-09:45	KO-09				KO-21			DO-07
09:45-10:00	KO-10				KO-22			DO-08
10:00-10:15	KO-11				KO-23			DO-09
10:15-10:30	Coffee Break				Coffee Break			
10:30-10:45								
10:45-11:00	KI-05		IIW Comm.XII SG212 Inter. Meet.		KI-09		IIW Comm.XII SG212 Inter. Meet.	DI-04
11:00-11:15								
11:15-11:30	KO-12				KO-24			DO-10
11:30-11:45	KO-13				KO-25			DO-11
11:45-12:00	KO-14				KO-26			DO-12
12:00-13:30	Lunch				Lunch			
Session Name	Quality & Production System	Special B-2	Metallurgy & Weldability2	FSW1	Special D	Special C-2	Arc Welding & Robotics2	Special B-3
13:30-13:45	KI-06		C2I-04	DI-01			IIW Comm.XII SG212 Inter. Meet.	
13:45-14:00								
14:00-14:15	KO-15		C2O-9	DO-01				
14:15-14:30	KO-16		C2O-10	DO-02				
14:30-14:45	KO-17		C2O-11	DO-03				
14:45-15:00	Coffee Break				Coffee Break			
15:00-15:15								
15:15-15:30	KI-07		C2I-05	DI-02			IIW Comm.XII SG212 Inter. Meet.	
15:30-15:45								
15:45-16:00	KO-18		C2O-12	DO-04				
16:00-16:15	KO-19		C2O-13	DO-05				
16:15-16:30	KO-20		C2O-14	DO-06				
16:30-16:45	Poster at Room J				Poster at Room J			
16:45-17:00								
17:00-17:15								
17:15-17:30								
17:30-17:45					The Ceremony for Poster Awards & Closing Remark at Room D			
17:45-18:00								

Technical Visits

Technical visits during the symposium are arranged to several industries and institutions located not so far from the symposium venue.

Technical Visit A: **Komatsu Ltd. Osaka Plant (Afternoon Mon 17 Nov)**
-Assembly & Welding Lines of Hydraulic Excavators-

Technical Visit B: **OTC DAIHEN Corp. Kobe Rokko Plant (Afternoon Mon 17 Nov)**
-Robot Assembly Shop, Spot Welding Machine Assembly Shop, FA Center-

Technical Visit C: **Daikin Industries, Ltd. Kanaoka Factory (Afternoon Tue 18 Nov)**
-Manufacturing Lines for Commercial Air Conditioning and Exhibition Room-

Technical Visit D: **Kawasaki Heavy Industries, Ltd. Akashi Work (Afternoon Tue 18 Nov)**
-Assembly lines of motorcycles and industrial robots-

Tentative Program of Special Sessions

Special Session A

Leading Edge of Preventive Maintenance and Repair Technology for Safe and Long Life Operation of Nuclear Power Station

(Sun 16 Nov)

(1) Learning from Failure -Some Recent Examples from Daily Practice-
H. Herold (University of Magdeburg, Germany)
(2) Contact Task Strategies for Remote Welding Based on Force Sensing and Control
H. Gao (Harbin Inst. Tech., China)
(3) Effect of overload on the fatigue threshold stress intensity factor range (ΔKth) of SUS316
Y. Hashikura(Japan Nuclear Energy Safety Organization, Japan)
(4) On the development of fully automated 3-D fracture mechanics analysis system
H. Okada (Kagoshima University, Japan)
(5) Recent Developments in the Measurement of Residual Stresses in Welded Nuclear Components
D. Smith (University of Bristol, UK)
(6) Finite Element Analysis of Welding Residual Stress in a Vessel Penetration Set-on Joint
N. Yanagida (Hitachi, Ltd., Japan)
(7) Numerical and Experimental Studies on Welding Residual Stresses in Reactor Pressure Vessel Penetrations
D. Deng (Research Center of Computational Mechanics, Inc., Japan)
(8) Residual Stress Measurement and Analysis of Dissimilar Metal Surge Line Nozzles
I. Muroya (Mitsubishi Heavy Industries, Ltd., Japan)
(9) Residual Stress Measurement using Neutron Diffraction for Girth-Welded Type 304 Pipes with Weld Metal deposited up to Half and Full Pile Thickness
R. Mizuno (Japan Power Engineering and Inspection Corporation, Japan)
(10) Welding Residual Stress Evaluation in a Nickel Base Alloy of a Thick Plate Multi-pass Butt Welds
T.Saito (Toshiba, Japan)
(11) Underwater Laser Beam Welding
M. Tamura (Toshiba, Japan)
(12) Underwater Laser Peening: The Process, Effect and Applications
Y. Sano (Toshiba, Japan)

(Mon 17 Nov)

(1) KEPCO's Activities on PWSCC of Ni-Alloys Used as PWR Pressure Boundary Materials
A. Yonehara (Kansai Electric Power Company, Japan)
(2) Stress Corrosion Cracking Morphology of the Alloy 600 Type Shield Metal Arc Weld Metals in Pressurized Hot-Water
S. Nishikawa (Japan Power Engineering and Inspection Corporation, Japan)
(3) Knowledge about SCC in Low Carbon Stainless Steels and the SCC Prevention for Core Shrouds
R. Okada (Tokyo Electric Power Company, Japan)
(4) Application of Outer Surface Irradiated Laser Stress Improvement Process (L-SIP) to Pressurizer as Residual Stress Improvement Method for Alloy 600 PWSCC Mitigation
K. Kamo (Mitsubishi Heavy Industries, Ltd., Japan)
(5) Effect of Tool Geometry on Tool Wear Characterization and Weld Formation in Friction Stir Welding of 316L Stainless Steel
Y. Chen (Osaka University, Japan)
(6) Uncertainties in Dissimilar Metal Weld Residual Stress Modeling
D. Rudland (Engineering Mechanics Corporation of Columbus, USA)
(7) Evaluation of Residual Stress Distribution in Austenitic Stainless Steel Pipe Butt-Welded Joint
M. Noda (INSS, Japan)
(8) The Temper Bead Clad Welding for Reactor Vessel Outlet Nozzle of PWR Reactor
K. Kamo (Mitsubishi Heavy Industries, Ltd., Japan)
(9) Applications of Repair & Life Extension Technologies for Nuclear Power Plant
H. Yamaoka (IHI, Japan)

Special Session B

Pipeline Technology Now and Then

(Mon 17 Nov)

(1) European Fitness-for Service Procedure – FITNET: Application to Pipeline Integrity
M. Koçak (GKSS, Germany)

(2) Weld Integrity from the Perspective of Strain-Based Design of Large Diameter and High Strength Pipelines
Y.Y. Wang (Center for Reliable Energy Systems, USA)

(3) X80 High Strength Linepipe for Strain-Based Design
J. Kondo (JFE Steel Corporation, Japan)

(4) Evaluation of Tensile Properties and Microstructure of High Strength Pipeline Girth Welds
M. Hamada (Sumitomo Metals, Japan)

(5) Mechanical Properties and Microstructure of Girth Welds for X100 Grade Plate and Pipe
W.H. Song (POSCO, Korea)

(6) Automatic Welding System Characterized by High Speed Torch Oscillation and Hydraulic Internal Clamp for Offshore Pipelines
H. Hosoda (Nippon Steel Engineering, Japan)

(7) RTD ROTOSCAN: Automated Ultrasonic Inspection of Pipeline Girth Welds, Its Present Status and Future Developments
T. Bouma (Applus RTD Group, The Netherlands)

(8) Nondestructive Evaluation of Strength, Toughness and Residual Stress for Pipeline Integrity Using Instrumented Indentation Technique
D. Kwon (Seoul National University, Korea)

(9) Estimating Stress-Strain Curve of Micro-Phases in High Strength Pipeline Steel using Nanoindentation
Jae-il Jang (Hanyang University, Korea)

(10) Brittle Fracture Assessment Method for High Strength Gas Pipelines for Strain-Based Design Application Based on CTOD Design Curve
T. Kubo (JFE Steel Corporation, Japan)

(11) Analysis of Crack-Tip Constraint in High-Pressure Pipeline under Axial High-Strain Conditions
Y. Takashima (Osaka University, Japan)

(12) Fracture Mechanics Based Assessment of Pipes
D. Siegele (IWM, Germany)

(13) Strain-Based Fracture Assessment of Pipelines
E. Østby (SINTEF, Norway)

(14) Effect of Pre-Strain History on Fracture of Pipeline Steels
Z. L. Zhang (NTNU, Norway)

(15) Quantification of Strength Mis-Match Effects on Limit Loads and Elastic-Plastic J for Surface Cracked Plates and Pipes
Y. J. Kim (Korea University, Korea)

(16) Tensile Strain Limits of Pipelines with Strength Mis-Matched Girth Welded Joints
H. Motohashi (Tokyo Gas, Japan)

(17) The Validation of Warm Pre-Stress Effect for Assessment of Reactor Pressure Vessel and Pipeline Components: Synthesis of Experimental Results and Analyses with Fracture Mechanics
D. Moinereau (EDF, France)

(18) Structure Integrity Assessment of Pressurizer under Pressure Thermal Shock
N. Gubeljak (University of Maribor, Slovenia)

(19) Effect of the Exposure in the Pressurized Hydrogen Gas on the Fracture Properties of the Cyclic Plastic Strained Carbon Steels for Piping
H. Shimanuki (Nippon Steel Corporation, Japan)

(20) Integrity Assessment of Pipeline after Severe Anchor Impact Load Assessment of Pipeline
M. Hauge (STAT Oil, Norway)

(Tue 18 Nov)

(1) Strain Limits and Seismic Integrity of X80 Linepipes
N. Suzuki (JFE Steel Corporation, Japan)

(2) Effect of Geometric Imperfections and Mechanical Properties on Bending Capacity of High-Strength Linepipes
T. Satoh (Osaka University, Japan)

(3) Effect of Mechanical Properties on Post-Buckling Ductile Failure Limit of Linepipe under Seismic Loading
M. Ohata (Osaka University, Japan)

(4) Development of a New Prediction Method of Fracture Propagation and Arrest in High Pressure Gas Transmission Pipeline
R. Higuchi (Sumitomo Metals, Japan)

(5) Running Ductile Fracture Analysis for JGA X80 Burst Test
S. Igi (JFE Steel Corporation, Japan)

(6) Unstable Ductile Fracture of Hydrogen and Methane Gas Pipelines
S. Aihara (University of Tokyo, Japan)

(7) Numerical Simulation of Crack-Arrest in High Pressure Pipelines
C. Dørum (SINTEF, Norway)

Special Session C

Recent Progress in Welding and Joining Technologies for Automotive Manufacturing

(1) Remote Welding Application for Closure Panels (Invited)
T. Tarui (Nissan Motor Co.,Ltd, Japan)

(2) Experience with joining of low weight and high strength material in Body Manufacturing (Invited)
H. Hornig (BMW AG, Germany)

(3) Electron beam welding of gear-wheels with extreme demands
F. Kolenic (First Welding Company, Slovakia)

(4) Progresses and Challenges in Laser Welding of Advanced High Strength Steels (Invited)
Y.N. Zhou (Univ. of Waterloo, Canada)

(5) Hardness and Mechanical Properties of CO2 Laser Welded Advanced High Strength Steels for Automotive (Invited)
C.Y. Kang (Pusan National University, Korea)

(6) Strength of laser welded joints in high strength steel sheets for automotive applications
H. Fujimoto (Sumitomo Metals, Japan)

(7) Fatigue Performance of Advanced High-Strength Steels (AHSS) GMAW Joints
C. Jiang (AET Integration, USA)

(8) Friction spot joining of low carbon and dual phase steel sheets
R. Ohashi (Kawasaki Heavy Industries, Japan)

(9) Flux cored wire for steel sheet with fatigue strength improvement
T. Kasuya (Nippon Steel Corporation, Japan)

(10) Development of the innovative GMA wire improving the flow direction of molten pool
Y. Umehara (Kobe Steel, Ltd., Japan)

(11) The effect of paint baking cycles on the spot weld strength of AHSS and consequences for testing procedures
T. Okada (Sumitomo Metals, Japan)

(12) Development of Aluminum/Steel Joining Technology for application of aluminum alloy to automobile body (Invited)
M. Kinefuchi (Kobe steel Ltd., Japan)

(13) Characteristics and estimation of interfacial microstructure with additional elements in dissimilar joints of aluminum alloys to steel
T. Ogura (Osaka University, Japan)

(14) Spot Welding between Aluminum Alloy and Several Kinds of Steel by Friction Stirring
K. Miyagawa (Toyohashi University of Technology, Japan)

(15) Friction Bit Joining of Ultra High Strength Steel and Light Metal Alloys
M.P. Miles (Bringham Young University, USA)

Special Session D

Welding Simulation Technology

(1) Dynamic behavior of Welding Angular Distortion with or without External Restriction
J. Zhang (Xi'an Jiaotong University, China)
(2) Establishment of contact models including fixture in numerical simulation of welding processing
Z. Zhang (Tsinghua University, China)
(3) Simulation and Experimental Validation of Selected Aspects of the Microstructure Evolution During GMA Welding
E. Rossiter (Aachen University, Germany)
(4) Material Flow and Mechanical Loads Prediction during Friction Stir Welding
X. Wang (Tsinghua University, China)
(5) Nitride formation ability on metal surface by pulsed laser irradiation
W. Takahara (Osaka University, Japan)
(6) Automated Generation of Temperature Fields for Numerical Welding Simulation
A. Pittner (BAM, Germany)
(7) Computation of Welding Distortions of Complex Constructions
M. Urner (Institute of Joining and Welding, TU Braunschweig, Germany)
(8) Analysis of Welding Deformation for Large-scale Complex Structure by Thermal Elastic-Plastic FEM
Y. Luo (Shanghai Jiaotong University, China)
(9) Simulation of Welding Deformation of Automobile Part Considering Stamping Results using Explicit Solver in LS-DYNA
N. Ma (JRI Solutions, Ltd., Japan)
(10) Prediction of Welding Distortion of Automobile Part using JWRIAN
H. Murakawa (Osaka University, Japan)

Organizations

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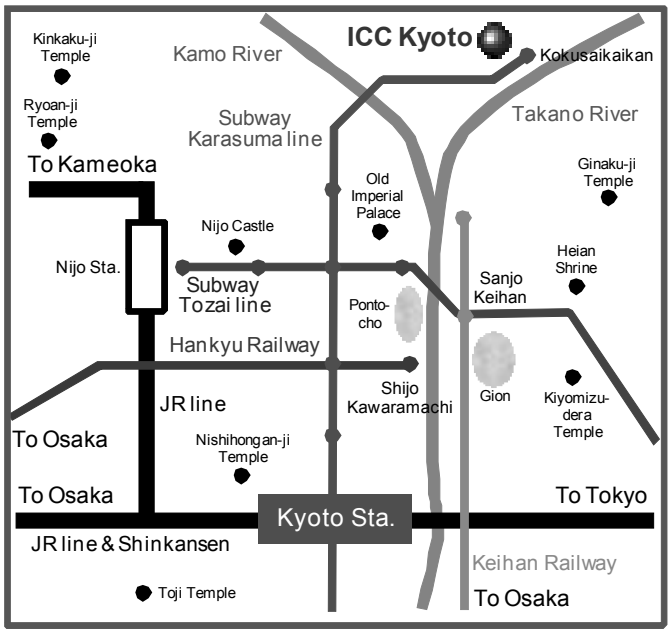
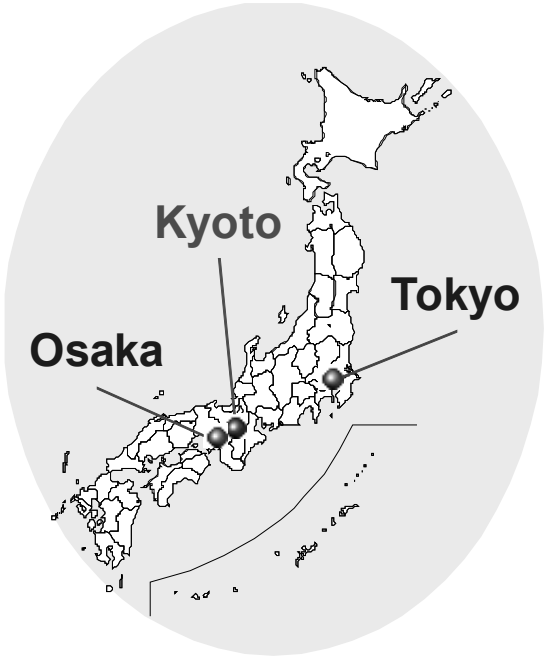
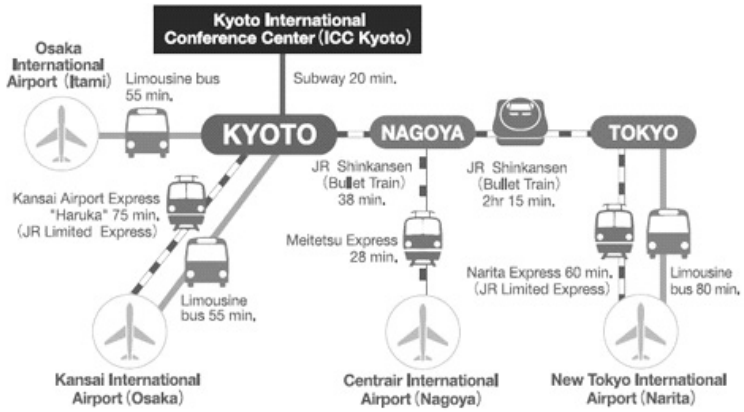
How to get to 8WS







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