

2nd International Conference, Zurich, 29 – 30 September, 1955

2.01 The Importance of the Alloy in Precision Casting

H J Meerkamp van Emden; NV Philips Gloeilampenfabrieken, Netherlands

2.02 Investment Cast Turbo Rotors and Blades

Dr Eiserman; Sulzer Bros. Switzerland

2.03 Report of a Survey made by the American Investment Institute

Mr Sulzer; Sulzer Bros., Switzerland

2.04 US Investment Casting Industry; Its Growth, Problems and Future

T Operhall, C W Schwartz

2.05 Investment X Process

Mr Turnball – presented by Sulzer Bros. Switzerland

3rd International Conference, 7-8 May, Eindhoven, 1956

- 3.01 A Review of the Properties of Stellite Alloys
M Riddihough; Deloro Stellite. UK
- 3.02 Tentative and Finalised Specifications in the USA for Investment Castings
V Di Sambuy; Associazione Italiana di Metallurgia. Italy
- 3.03 Could mistakes in the past in the Precision Foundry be avoided in the future?
B G Helders. N.V. Industrie, Netherlands
- 3.04 The Philips X-Ray Intensifier
H J Meerkamp van Emden; NV Philips, Netherlands
- 3.05 Defects in Precision Castings
A Bouman: Werkspoor N.V. & C Nieuwenhuis; NV Philips, Netherlands
- 3.06 An Approach Towards the Classification of Casting Defects in Investment Castings
W H Sulzer: Sulzer Brothers, Switzerland
- 3.07 Decarburization in Investment Castings and its Heat Treatment
N J Grant
- 3.08 Price Estimation and Cost Calculation in Precision casting
F Polzgutter; Deutsche Edelstahlwerke AG Germany
- 3.09 Some Applications of Mathematical Statistics in the Microcast Process
JJ Tiedema; Werkspoor N.V. Netherlands

4th International Conference, Stratford upon Avon, UK, 1957

4.01 "Speaking of Investments"

H J Meerkamp van Emden; NV Philips, Netherlands

4.02 Tour of the P.I. Castings (Altringham) Ltd

D Armitage, P.I. Castings Ltd, UK

4.03 Investment Founders Discuss Specifications

EICF Specification Sub Committee

4.04 Application of Statistical Control in the Production of Precision Castings

V di Sambuy; Associazione, Italiana di Metallurgia, Italy

4.05 Wax Models for use in the Investment Casting Process

E Sargent; Aster, Boisselier & Lawrence Ltd, UK

4.06 Influence of Vacuum Melting on the Properties of Various Materials

W Moore, A Kiesler, General Electric Research Laboratory, USA

4.07 Refractories and Mould Materials for Vacuum Melting and Casting

H O McIntire

4.08 Investment Casting of Non Ferrous Metals

E Weisner; Furstlich Hohenzollernsche Huttenverwaltung Laucherthal, Germany

5th International Conference, Paris, 1958

- 5.01 Quality Control of Melting Stock fro Investment Casting
L Taylor, GL Willan Ltd.UK
- 5.02 Investment Casting in the US and UK: Part 1 – US Investment Casting Activities
H P Gray: Gray Syracuse Inc. USA
- 5.03 Investment Casting in the US and UK:: Part 2 – Metal Specifications and Practices in the USA
R Waindle, WaiMet Alloy Co. USA
- 5.04 Development of Corrosion Resisting Investment Casting with Higher Mechanical Properties and Good Weldability
R Taylor: Firth Vickers Stainless Steels Ltd, UK
- 5.05 Die Leistung von gegosseeenen und warm verformten Werkzeugen aus Schnellarbeitssthl und ihre metallurgischen Grundlagen
K-A Krekeler, Behler & Co AG, Germany
- 5.06 Oberflächenfehler bei Feinguss
E-G Nickel, VDG, Germany

6th International Conference, 1-3 June, Essen, 1959

- 6.01 Problems Poses Par L' Armurerie au Fondateur a Cire Perdue
P Mathy, Usines Gilson La Croyère, Belgium
- 6.02 Das Batten-Cordonnier Ststem zur Klassifikation der Fachliteratur
S Jouwersma
- 6.03 Bericht über die Arbeiten des Fachausschusses Feinguss innerhalb des Vereins
Deutscher Giessereifachleute
Dr E G Nickel, Dr W Bochum, D.E.W. Bochum, Germany
- 6.04 Estimation of the Temperature of the Melt
H J Meerkamp van Emden; NV Philips Gloeilampenfabrieken, Netherlands
- 6.05 Some Investment Cast Alloys for High Temperature Service
D R Wood; Mond-Nickel, UK
- 6.06 Technical Communication Between Investment Casting Manufacturers and their
Customers
L R Schwedes; Lawrence Laboratories, USA
- 6.07 The Investment Casting of Precious Metals
P E Gainsbury, Mond-Nickel, UK
- 6.08 The American Investment Casting Industry in 1959
R J Waindle; WaiMet Alloy Company. USA
- 6.09 Tolerances in Wax Moulding
G Nieuwenhuis; NV Philips Gloeilampenfabrieken, Netherlands
- 6.10 Considérations sur Différents Arguments de Vente
M W Zwerner, Durox S.A. Switzerland
- 6.11 Matrizenherstellung für Feinguss-Modelle
E Hengler; Carp und Hones, Germany
- 6.12 Silica Binders for Investment Casting
J I Evans; Monsanto, UK
- 6.13 Eisenkunstguss um 1800
Dr S Theissen-Trier, Germany

7th International Conference, Liège, 4-6 July, 1960.

- 7.01 Specifications for the Investment Casting Industry in the UK
L S Taylor & A G Mason; A.C.T. (Birm). UK
- 7.02 Tätigkeit Der Deutschen Feingiessergruppe Auf Dem Gebete Der Werkstoff
Untersuchungen.
Dr Ing K A Krekeler; Gebr. Böhler & Co A.G., Germany
- 7.03 Introduction to the American Film on Shells for Investment Casting (K W
Thompson)
H J Meerkamp van Emden; NV Philips Gloeilampenfabrieken, Netherlands
- 7.04 Some Activities of the British Investment Casters' Technical Association
J Bolton, BICTA, UK
- 7.05 Le Pyrometre a Immersion aux Points Multiles avec Enregistreur de Temperatures
M F Faus; Maquinas de Coser, Spain
- 7.06 Einfluss der Giessbedingungen auf Eigenschaften Hochwaemfester
Legierungen
W Tolfaute & U Gravenhorst; Freid, Krupp Widia-Fabrik, Germany
- 7.07 Investment Casting in Vacuum: Some Experiences
L S Taylor; A.C.T. (Birm). UK
- 7.08 The Investment Casting Industry, US, 1960
R F Waindle, Michigan, USA
- 7.09 The Influence of Test Bar Design on the Mechanical Properties of Two Cast High
Temperature Alloys
R M Cook, P J Penrice; Mond Nickel Company, UK
- 7.10 Report on the Impact Value of Castings – Survey by EICF member Companies
P Mathy; S.A. Ursines Gibson, Belgium
A Bouman; Werkspoor, Netherlands

8th International Conference, Florence, 11-13 September, 1961

- 8.01 The Vacuum Techniques Applied to Investment Casting
A Dunlop; Jessop-Saville Ltd, UK
- 8.02 The US Market for Investment Castings and Casting Reliability
R Waindle, Michigan, USA
- 8.03 Rundentkohlung Bei Präzisionsguss
K Keiper; Gebr. Pfafdf. Nahmaschinenfabrik
- 8.04 Equipment for Carbon Restoration in Precision Castings
S Grunde Ohlin, B Behle; AB Kanthal, Sweden
- 8.05 Randsenkung Ein Beispiel Aus Der Praxis
S Pellier; Deutsche Spinnereimaschinenbau, Germany
- 8.06 Une Fonderie a Modele Perdue Grand Serie
M Marinier; Regie Nationale des Usines Renault, France
- 8.07 Technical Reports and US Patents on Investment Precision Castings
R Tindula; US Department of Commerce, USA
- 8.08 Investigation on Impact Properties
A Bouman; Werkspoor, Netherlands
- 8.09 The Misrun Problem in Investment Castings
H Rosenthal; Frankford Arsenal, USA
- 8.10 Vacuum Cast Rotors in "Nimocast 713V" Alloy
R Cook; Mond Nickel Co. UK
- 8.11 The Drying of the Dip Coat
B Buysman et al; NV Philips, Netherlands
- 8.12 Semi Continuous Vacuum Melting and Casting of Investment Moulds
L Taylor; GL Willan Ltd, UK
- 8.13 Bewertungsmethoden Für Feinguss
J Sprung; Bohler & Co AG, Germany
- 8.14 Contribution à l'étude des Caractéristiques Mécaniques d'acier et d'alliages moulés à la Cire Perdue
M Roques, M Cameo; Microfusion, France
- 8.15 Ausführungen über ein neues, Billigeres Verfahren Formsand mit Kolloid der Kieseläure zu Binden
W Kring; Dynamit Nobel AG, Germany
- 8.16 The Minicast Process for Commercial and Industrial Investment Castings
J Cadieux; Casting Engineers Inc, USA
- 8.17 A Casting Problem in NonFerrous
K Thompson; K Thompson Tool Co.Inc. USA

8th International Conference, Florence, 11-13 September, 1961 - continued

8.18 Investment castings in Spring Steel

J Gwynn; PI Castings Ltd, UK

8.19 Commentaire du Film "Le Procédé Shaw"

H Marshall; Nicholas Hezmark, France

9th International Conference, Stockholm, 27-29 May, 1963

- 9.01 Recent Developments in Investment Cast Nickel Base High Temperature Alloys
D R Wood; Mond Nickel Inc. UK
- 9.02 Anschnitt Und Abguss Eines Hochbeanspruchten Fligzeugteiles Nach Dem Feinguss-Verfahren
H Ballewski; Zentroguss Hizenheim, Germany
- 9.03 Case Study of an Investment Casting, Gas Burner Nozzles
N Mason; Firth Vickers Stainless Steels Ltd, UK
- 9.04 Solidification of Investment Castings
H Rosenthal; Frankford Arsenal, USA
- 9.05 British Investment Casting Specifications
L S Taylor; BICTA Metallurgical Committee
- 9.06 Une Etude Comparative des Possibilities Economeques Contemporaine d'une Fonderie a la Cire Perdue
C A Nieuwenhuis; 'Cirex' Philips Netherlands
- 9.07 The formation of Blisters in the Dip-Coat of Investment Moulds
P J Buysman; NV Philips, Gloeilampenfabrieken, Netherlands
- 9.08 Quantum Planning
K Hemmes 'Cirex' Philips, Netherlands
- 9.09 Hat Der Feinguss Eine Zukunft
H Moeschlin; Precisions-Produkte AB, Sweden
- 9.10 Ceramic Cores
B Behle, AB Kanthal, Sweden.
- 9.11 Specifications in the USA 1963
R E Waindle; Techno-Metallurgical Co. USA
- 9.12 Cast v Forged Turbine Blades for Aircraft Gas Turbines
W H Sharp; Connecticut Metallurgical Corp. USA
- 9.13 Ethyl Silicate
G Fredenmark; AB Nyäs-Petroleum, Sweden
- 9.14 Adaption of the Ceramic Shell Mould to Meet Mass Production Requirements
E J Shepherd; Monsanto Chemicals Ltd. UK
- 9.15 Le Procédé Ceramcast
H J Marshall; N Hezmark, France

10th International Conference, 4-7 October, Madrid, 1964

- 10.01 Losung Einer Massproblems
W Wiedenhoff; Fürstlich Hohenzollernsche Hüttenverwaltung, Germany
- 10.02 Pressure Casting in Investment Moulds
S Lipson, F Ripkin, Frankford Arsenal, USA
- 10.03 Silica-Aluminiumester, ein Neuer Binder Für Präzisionsgussformen
W Dittricht, Dynamit Nobel AG, Germany
- 10.04 Dewaxing Autoclaves
M Pickard; Leeds and Bradford Boiler Company, UK
- 10.05 Superalloys for Investment Precision Casting
A Dunlop; Jessop-Saville Co. UK
- 10.06 An Investigation of Catastrophic Oxidation of Castings Produces from N-155 Alloy
W M Mathes, N Davidson, B Heyer; Arwood Corp. USA
- 10.07 Pre-formed Cores, their use, Manufacture and Benefits
E M Briscoe; Doulton Industrial Porcelains, UK
- 10.08 The Future Development of the Lost Wax Casting Process
P A Crooke; Rolls-Royce Ltd. UK
- 10.09 An Automatic Bottom Pouring Method for Invested Moulds, Eliminating the Melting Furnace
J B Ingall; AEI Birlec, UK
- 10.10 Eigenschaften und Verhalten von Wachsen bei der Herstellung von Waschmodellen für den Metallpräzisionsguss
E Frink. Germany
- 10.11 The Relative Merits of Medium and High Vacuum Casting with some notes on a recent development in Vacuum Refractories
L S Taylor; G L Willan Ltd. UK
- 10.12 Casting Copper Parts
J Valenta; Cercast, Canada
- 10.13 Untersuchungen an einem Warmfesten Chromstahl mit Co-Zusatz and Hochwarmfesten Co-Legierungen
K A Krekler, H R Kautz, H Gerlach; Gebr Bohler, Germany
- 10.14 The Application of the Ceramic Shell Process to the Production of Investment Castings
D E Hope; Monsanto Chemicals UK
- 10.15 How to Keep Tolerances in Wax Models
C E Nieuwenhuis; Cirex, Netherlands
- 10.16 Investment Casting has a future
J Aherne Heron; Trucast, UK
- 10.17 Hat der Feinguss eine Vergangenheit
H Moeschlin; Precisions Produkter A.B. Sweden

12th International Conference, 11-13 September, Eindhoven, 1967

- 12.01 Soluble Cores Based on Calcium Phosphates for use with certain Non Ferrous Alloys
K Rose; Doulton Industrial Porcelains Ltd. UK
- 12.02 Serienfertigung von Feingussteilen
H Staehl; Gebr. Sulzer, Switzerland
- 12.03 Feingusswerkzeuge aus dem Schnelldrehstahl mit Hoher Schlagtorsionszähigkeit
O Kastanek; Techn Hochschule, CSSR
- 12.04 Influence of Casting Conditions on the Grain Size and Tensile and Stress Rupture Properties of Cast Nickel Base Alloy MC 102
P J Penrice, E G Richards, International Nickel Ltd. UK
- 12.05 Precision Castings in Titanium and Titanium Alloys
A Dunlop; Dunlop Metallurgical Services Ltd, UK
- 12.06 History and Future of Gas Turbine Alloys
R H Tielemann; Martin Marietta Corp. USA
- 12.07 Development of the Extended Launder Process for High Quality Melting Stock and Lost Wax Castings.
L S Taylor; GL Willan Ltd, UK
- 12.08 Applications du Moulagede Précision a des Fabrications d'Outillages
J Blanchard; Ac Legénsil at Blanchard, France
R G Greenwood; Unicast Development Corp. USA
- 12.09 Meeting the Social Obligations of the Investment Casting Industry
A Saunders; A Saunders & Co. USA
- 12.10 The Development of a non Shrinking Wax "Nosink", Machinery for its use and the result: High Precision Casting.
H Moeschlin; Precisions Produkter A B Sweden
- 12.11 The Relationship Between the Structure and the Strength of Ceramic Shell Moulds and Permeability of Ceramic Shell Moulds
P J Buysman, W Luiten, Philips Research Laboratories, Netherlands
- 12.12 Dipcoat Nucleation
R C Feagin; Howmet Corp. USA
- 12.13 Ventilation and Protection against Radiant Heat in Hot Factories
H Bordes Philips Gloeilampenfabrieken, Netherlands
- 12.14 Feingussteile aus Martensi Aushartbarem Nickel-Cobalt-Molydänstahl
E G Nickel; Deutsche Edelstahlwerke, Germany
- 12.15 The Influence of Mechanisation on the cost of Investment casting
G M Tofield, E J Shepherd; Monsanto Chemicals. UK

14th International Conference, Zurich, 5-7 October, 1970

- 14.01 The Economic production of Investment Cast Valves in Austenitic Steel 18/8
O Kastenek; CSSR
- 14.02 Experiences in Setting-up Mechanised Shell Mould Production in a Typical Jobbing Investment Foundry
D Hope; Monsanto Chemicals, UK
- 14.03 Investment Casting Supports Development in the Non-polluting Sterling Engine
G TM Neelen; NV Philips, Netherlands
- 14.04 Isostatically Presssed Products in the Investment Casting Industry
W B Harris; Refractory Mouldings, UK
- 14.05 Design features of an Automatic Production Investment Casting Machine
W Hart; Elliott Mechanical Automation Ltd, UK
- 14.06 The Features and Development of Wax Injection Machines
A Muesfeldt; H Maihak AG, Germany
- 14.07 A Film on Investment Casting made at CIREX with the Collaboration of the Delft Technical University
B Helders; Cirex BV, Netherlands
- 14.08 Speeding up Quotations by Positioning the Relevant Price factors in a Nonagram
H Moeschlin; Precision-Produkte AB, Sweden
- 14.09 The INCAMET Rapid Shell System of Investment Casting
A Dunlop; UK
- 14.10 Effect of Mould Materials on Micro Cracks in Ceramic Shell Moulds during Flash Dewaxing
T Nishigori, Ishikawajima-Harima, Heavy Industries Co, Ltd, Japan
- 14.11 Some Factors influencing the Dewaxing of Ceramic Shell Moulds
G Halsey, UK
- 14.12 Precision Investment Casting of Aluminium Alloys
W O Beer; Canadian Marconi Company, Canada
- 14.12 The Economies of Sand or Shot Blasting in Investment Casting
H Schulze; Scheinmann & Vogel, Germany
- 14.14 Cost reduction in the Investment Foundry
J Broughton; Singer Manufacturing, UK
- 14.15 Materials used for Lost Wax Models
D Muller; Honsel Werke, Germany
- 14.16 Quality of Wax Patterns as a Function of Wax Preparation and Injection
V Stanciu; Tempcraft Tool & Mold Co. USA

16th International Conference, London, 1974

- 16.01 Ductile Iron Castings at Two Tons per Day
G D Chandley; Hitchiner Manufacturing, USA
- 16.02 Factors Influencing the Properties of Cast High Strength Nickel Base alloys
J Hockin; Hockin Associates, Canada
- 16.03 The Development and Application of the Lost Wax technique in Dentistry
J N Kidd; University of Leeds, UK
- 16.04 The Value of Ceramic Feeders in Investment Casting
M Leadbetter; Nalfloc Ltd, UK
- 16.05 Recent Developments in Autoclave Dewaxing
M Pickard; Leeds & Bradford Boiler Co. Ltd. UK
- 16.06 Analytical Spectrometric Inspection in the Investment Foundry
G Rotamartir; Microfusione, Italy
- 16.07 Developments in the Transition from Solid Moulds to Shell Moulds for the Production of Non Ferrous investment Castings
F Valenta; Cercast Canada
- 16.08 Ceramic Cores Materials and Manufacture
C E Webb; Doulton Industrial Products Ltd, UK
- 16.09 Manufacture of Large Ceramic Cores by Injection Moulding
S Uram; Certech, USA
- 16.10 Managing the Energy Crisis: Some Implications for an Effective International Energy Project
M K Badawy; Cleveland State University, USA
- 16.11 Unidirectional Solidification of Nickel Base Alloys
E Grundy; International Nickel Ltd. UK
- 16.12 Ceramic Moulds with a Sprayed Internal Layer
W Dittrich, Dynamit Nobel A.G. Germany
- 16.13 The Identification, Segregation and Preparation of Nickel and Cobalt Base Alloy Scrap for Air and Vacuum Induction Melt Applications
G A Sked; Ireland Alloys Ltd, UK
- 16.14 The Unimate Industrial Robot and Investment Casting
W G Lamb; Unimation Inc, UK

18th International Conference, Stockholm, 18-21 June, 1978

- 18.01 Investment Cast Cutting and Forming Tools
R McCallum: National Engineering Laboratory
- 18.02 Use of an Industrial Microwave Furnace for Dewaxing
J Hichon: Fonderie de Laval, France
- 18.03 Computer Aided Determination of Technological Time of Solidification of Wax Patterns
K Rushin Technical University of Czechoslovakia
- 18.04 Trace Elements in Investment Castings
R Hambleton, Howmet Alloys International, UK
- 18.05 Flexible Automation of Shell Mould Production
S Soini Oy Rosenlew, Finland
- 18.06 Estimating the Wax Temperature Range for Mould Injection
G Szende, t Kovacs: Institut fur Technologie des Maschinenbaue, Hungary
- 18.07 The Univocal Appreciation of Casting Ultimate Strength
S Balicki et al: Politechika, Czeestochowska, Poland
- 18.08 Thermographic Investigation of Ceramic Mould Forming Processes in Investment Casting
Chr Iv Ivanov: deL'Institut Superieur, Bulgaria
M Schklennik: deL'Institut dses Aciers et Alliages, URSS
- 18.09 Quality of Slurry Materials for Ceramic Shell Moulding
P Taylor, Monsanto, Belgium
- 18.10 Some Mathematical Models of Changes Involving Mechanical Properties in Connection with Structural Stability
V Bina, J Hakl, National Institute for Materials, Czechoslovakia
- 18.11 Unusual Additions and their Influence on Steel Crystallisation
O Kastanek: Technical Hochschule, Czechoslovakia
- 18.12 A Few Considerations on Investment Casting of Textile Machine Parts
A Fulop et al: Research and Engineering Centre for Machines and Equipment for Light Industry, Romania.
- 18.13 Production Experience with Boron Modified Nickel Base High Temperature Alloys
C Hammersley: Sorcery Metals Ltd, UK
- 18.14 The Influence of Nitrogen and Oxygen on the Castability of IN100
K Harris, r Schwer, Cannon-Muskegon, USA
G Brown, D Valentine, AiResearch Casting Company, USA
- 18.15 High Speed Motion Picture Analysis of the Wax Injection Process
T Piwonka; TRW Inc. USA
- 18.16 Demonstration of Mechanisation Concepts for the Investment Casting Process
T Piwonka; TRW Inc. USA
- 18.17 Removing Ceramic Cores and Coating using High Pressure Water
R Fisher: Dare Hydrophone Ltd, UK

18th International Conference, Stockholm, 18-21 June, 1978 - continued

- 18.18 Technical Aspects on the use of Ceramic Cores fro Investment Casting
J Doskar et al, Technical University of Brno Czechoslovakia
- 18.19 Dendrite Arm Spacing in the Cast Microstructure of Alloy A 356
P Wilson: Arwood Corp, USA
- 18.20 Preformed Cores: Some Case Histories and Recent Developments
K Rose, J Poulter, C Webb: Doulton Industrial Preoducts UK
- 18.21 Electrohydraulic Blasting of Investment Castings
J Valenta: Vestshell Inc, Canada
- 18.22 Characteristics of some AluminoSilicate – Colloidal Shell Systems
R Feagin: Remet Corp USA
- 18.23 The Influence of Different Test Bar Dimensions on the Mechanical Properties of Investment Cast Steels
E Hauschild, F Klein: Schubert & Salzer, Germany
- 18.24 On Cost Reduction and Process Improvement by the use of In House Wax Reclamation.
K Wiese: Unimation Inc, USA
- 18.25 A Survey of the Physiological Conditions Relevant to Work in an Investment Foundry
F Alacevich, Pacchetti; Microfusione, Italy
- 18.26 Promising Development of Investment Casting in the USSR
L Koslov: Moscow Steel Institute, USSR

19th International Conference, Palma de Mallorca ,10-14 October, 1982

- 19.01 Use of Foamed Ceramic Nodules to Increase Shell Permeability
G Chandley; Hitchener Mtg. Co. Inc., D Rostoker; Norton Co. USA
- 19.02 Actions Taken to Improve the Working Conditions in the Wax Assembly Department at Microfusione Italiana (MFI)
F Alacevich & L Pozzoli; Microfusione Italiana, Italy
- 19.03 The Scope for Using Silica Binder Gel testing Time
P R Taylor; Monsanto European Technical Centre, Belgium
- 19.04 Time Dependant Change in Precision Investment Casting Slurries on a Silica Sol Basis and Possibilities for their Control
H Friedrich; Schubert 7 Salzer AG, Germany, P Schober; Bayer AG, Germany
- 19.05 New Waxes for Investment Casting
A Saunders; Saunders Foundry Supply Inc, USA
- 19.06 Single Crystal Alloys for Gas Turbine Blades
J Northwood, M Winstone, J Greenbank; NGTE, UK
- 19.07 Computer Gesteuertes Mechanisches Abtrennen von Feinguss
W S Blazek, T Piwonka; TRW, USA
- 19.08 Development of the CM Series of Single Crystal Alloys for Advanced Technology Turbine Components
K Harris, G Erickson, R Schwer; Cannon Muskegon Corp, USA
- 19.09 Segmented Mould Processing of Castings Having Circular Symmetry
W Blazek, T Piwonka; TRW, USA
- 19.10 Metallurgical Advantages of Induction Melted/AOD Refined Master Alloy
J Snowden, R Quigg, R Schwer, Cannon Muskegon Corp. USA

20th International Conference, 4-7 June, Brussels, 1986

- 20.01 Improved Ceramic Mould Technology and Process Automation
W Weinacht; Feingusswerk, Lobenstein, German Democratic Republic
- 20.02 A New Approach to the Assessment of Hot Deformation of Ceramic Shell Moulds
R McCallum, W Lang; Nationals Engineering Laboratory, UK
- 20.03 Alumina Ceramic Shell Moulds for Directional Solidification of Nickel Base Superalloys
J Cihlar, K Rusin; High Technical University, Brno, Czechoslovakia
- 20.04 Improvement of Mechanical Properties on a Ni Based Superalloy by the reduction of Microporosity Levels through Mould Design
R Lowe, J McGobbon et al; National Institute for Materials Research, South Africa
- 20.05 Further Development Work on High Strength High Integrity Investment Castings
R McCallum, W Lang, R Loy; Nationals Engineering Laboratory, UK
- 20.06 Defining the Material Properties in Conventional Precision Casting by means of Process Parameters involving Melt and Temperature Progression
K Bydlowski, H Friedrich; Johannes Croning GmbH, Germany
- 20.07 Directional Solidification and Single Crystal technology in the Investment Casting Process
F Feikus, F Hediger, Giessereie Institut RWTH, Germany
- 20.08 Application of Polish experiments and Materials in Casting the Endoprosthese of the HIP Joint
L Lusniak-Lech, J Stachanczyk, Foundry Research Institute, Poland
- 20.09 Remelting Practice for the Precision Caster
T Klomp, J P Kiety; Cannon Muskegon, USA
- 20.10 The Benefits of Double Refined Remelt Barstock to the General Cleanliness of Investment Castings
W Molloy, J Dykes, T Dalton; Glossop Superalloys Ltd, UK
- 20.11 Ceramic Foams for Metal Filtration
C Richmond, W Steen, Morgan Refractories Ltd, UK
- 20.12 The Use of Supervac Melting and Advanced Casting Technology in the Production of High Integrity Large castings
P E Wauby R&C Ltd, G H George, Deritend Vacuum Castings Ltd, UK
- 20.13 New Developments in the Manufacture of Aluminium Investment Castings
D Lorch; Fürstlich Hohenzollernschen Huttenverwaltung Laucherthal, Germany
- 20.14 Titanium Investment Casting – A Review of Technology
R Feagin; Remet Corporation, USA
- 20.15 Titanium Investment Castings: Properties and Applications
Ch Liesner, H P Nicolai, Titan-Aluminium Feinguss GmbH, Germany
- 20.16 From Micro to Mega HIP
D J Roberts HIP Ltd, UK
- 20.17 Upgrade and Repair of Aerospace Castings by GTA Welding Process
W H Simon; US Welding Corporation, USA

21st International Conference, Lugano, Switzerland, 27-30 June 1990

- 21.02 The role of analysis in the development of new casting wax materials
A. Barker, Burmah Speciality Chemicals; P Solomon, Yates Manufacturing Co.
- 21.04 An analysis of the changes in properties of a copolymer silicate binder during the process of its aging
A Karwinsky, L Lusnjak : Lech, Academy of mining and metallurgy, Poland
- 21.05 The production of water base shells in one day
*R Challinor, E Williams: Drytech Processing Ltd
W Lang, R McCallum: Nationa Engineering Laboratory*
- 21.07 Improved casting characteristics by optimised shell schedules
*S Plibury, I Metcalf: Vickers Precision Components UK
W Lang, R McCallum: Nationa Engineering Laboratory*
- 21.08 An analysis of ceramic shell materials
M Hendricks: Ransom & Randolph USA
- 21.09 A comparison of investment casting shell making practice
J Regrych: Minco Inc, USA
- 21.10 New trends and developments in vacuum precision casting equipment with special consideration for cold crucible melting.
F Hugo, Leybold AG, Germany
- 21.11 Observations of the atmosphere in a vacuum casting furnace
J M Gibbon, S Yates: CSIR, South Africa
- 21.12 An alternative single crystal casting process
*F Bernasconi, Precicast, Switzerland,
B Walser, J Wortmann, Sulzer-MTU Casting Technology, Switzerland*
- 21.13 Present and future trends in DS/SC Technology
G Higginbotham, Rolls Royce plc
- 21.14 Investment Casting of Aluminium-Lithium Alloys
C Bolfarini, P Sahm, W Axmann: Aachen Foundry Institute
- 21.15 A comparison of the lost pattern casting process
T Piwonka, University of Alabama, USA
- 21.16 Simulation of the solidification process in an integral rotor and comparison of results with casting practice.
H Bowles, P Carter, P Kotscky, J McGibbon: CSIR South Africa
- 21.17 BICTA Research and Development
R Smart, BICTA
- 21.18 Development of a versatile shell system
J-C Carlier, Fonderie Formetal, Sa, Belgium
- 21.19 "Inductive Cold Wall Metallurgy" A new approach to the manufacture of highly stressed investment castings for high technology applications.
S Baliktay, E-G Nickel, Vacuacast Feinguss GmbH, Germany

22nd International Conference, 22-25 April, Paris, 1992

- 22.01 Update on Market Trends in the Investment Casting Industry
R Williams; Blayson Olefines Ltd. UK
- 22.02 Development of European Standards for Aluminium Castings
D B Critchley; BICTA. UK
- 22.03 Factors Affecting the Precision of Investment Casting
J Dudley, G Bennett; Sandwell College of Technology
- 22.04 A Review of Investment Casting applications and Process Problem Areas
J Shearer; TPC Components. Sweden
- 22.06 Rapid Grinding
G Bell; AW Bell Pty. Australia
- 22.07 New Approach to the Determination of the Dropping Points and Softening Points of the Pattern Waxes used for Investment Casting
P Bouvet; CTIF. France
- 22.08 Innovative Pattern Waxes to Satisfy Modern Casting Needs
J Argueso; M Argueso & Co, G Schiefelbein; Remet, C Kovach; Signcast. USA
- 22.09 Advances in Reclamation and Reconstitution of Filled Wax
D J Morson, R B Williams; Blayson Olefines Ltd. UK
- 22.10 Continuous Wax Cooling at the Wax Injector for Higher Productivity
B S Phipps; Mueller Phipps International Inc. USA
- 22.11 Le Place de la Fonderie a Modele Perdu Français
J-G Deponge; SGFF. France
- 22.12 The Effect of Impurities upon the Thermal Reponse of Several Proprietary Casting Binders
S Jones, P Marquis; Uni. of Birmingham, B Page; Deritend Precision Castings. UK
- 22.13 Development of Meaningful techniques for Testing Investment Casting Shell Mould
R McCallum; NEL. UK
- 22.14 Plaster Investments for the Block Mould Process
P Magnier; UCPI. France
- 22.15 Factors Affecting Shell Strength and the Effect of Dry Time on Shell Strength
M Guerra, W Roberts; Remet Corporation. USA
- 22.16 On Line Monitoring of Shell Drying Cycles
J MacGibbon, et al; CSIR. South Africa
- 22.17 Environmental Conditions and Shell Materials Impact on Shell Integrity
M Hendricks, D Hsu; Ransom & Randolph. USA
- 22.18 Evaluation of Silica Sols as Ceramic Shell Binders at high Temperatures.
M Persson; EKA Nobel, A Törnecrona; Chalmers Uni, S Karlsson; Ceramic Inst. Sweden

22nd International Conference, 22-25 April, Paris, 1992 - continued

22.19 Comparison of Fused Alumina Shell System using Rapid Dry and Standard Binders for DS/SX Components

S Barnett; Incast Consultancy Ltd. UK, D Pocci; CSM. Italy

22.20 Fused Silica ASA High Temperature Material

J Snow; Minco. USA, R Frost; Colorado School of Mines, D Sturgis; PCC. USA

22.21 Environmental Protection – Problems and Possible Solutions

D Duffy; Wex Chemicals. UK. D Yarwood; Akzo; France

22.22 Measurement of Emissions During Shell Manufacture

S Yates, J MacGibbon; CSIR, South Africa

23rd International Conference, Prague, 1994

- 23.01 Feingiessen in der Tschechischen Republik
M Pavelka; SPL Czech Republic
- 23.02 The World Investment Casting Market
R B Williams; Blayson Olefines Ltd. UK
- 23.03 New Developments in Rapid Dry Water Based Shell Systems
M J Hendricks et al; Ransom & Randolph. USA
- 23.04 Remasol Adbond BV: A Practical Update
J R Pyne; Remet Corporation. USA
- 23.05 Influence of Backing Materials on the Thermal Profiles of Investment Casting Moulds
P Withey, S Jones, P Marguis; University of Birmingham. UK
- 23.06 Reactions at the Mould/Metal Interface in Investment Castings
T S Piwonka; University of Alabama. USA
- 23.07 CAEF Its Objectives and Activities for the Foundry Industry
H Chapotot; CAEF. France
- 23.08 Developments in Aerofoil Ceramic Core Measurement Techniques
K Howells, J Pearson; Certech International UK, J C Doriath; SNECMA, France.
- 23.09 Analysis of the Nature and Extent of the Interaction Between Ceramic Foam Filters and High Chrome Steel.
N Immam, P Marguis, S Jones; University of Birmingham. UK
- 23.10 Replicast Lost Foam or Lost Cause
M C Ashton, Casting Technology International. UK
- 23.11 Walter Deritend a.s – A Joint Venture in the Czech Republic
J D Sharp; Triplex Lloyd. UK
- 23.12 Moulding Processes – A Personal Assessment
J Lawrenson; FMJ International Publications Ltd. UK
- 23.13 The effect of Fracture Toughness Degradation on Life Time Estimation using the Critical Defect Criterion
V Bina, J Hakl; SVUM, Czech Republic
- 23.14 Rapid Prototyping: Part of a Computer Integrated Approach to Investment Casting
D I Wimpenny; University of Warwick. UK
- 23.15 Environmental Protection: Legislation and Practice.
R F Smart; EICF. UK

24th International Conference, 10-12 May, Rome, 1998

- 24.01 Revolution in Pattern Wax
J P Argueso, P Solomon; M Argueso & Co, Inc. USA
- 24.02 Ceramic filters for Abatement of Smoke from Mould Burnout Furnaces
D Morson; Blaysons.UK, C Withers; Caldo Environmental Engineering UK
- 24.03 Shell Drying – Water Base
J D Snow, D H Scott; Minco, Inc. USA
- 24.04 Unexpected Binder Particle Size Effects in “Ludox SK” Slurries
W O Roberts; Dupont USA
- 24.05 Comparison of the Properties of Zircon/Alumino-Silicate Shells with water based and Ethyl Silicate based Slurries
M Guerra; Remet Corporation. USA
- 24.06 An Improved Investment Casting Procedure Exploiting Water Based Silica Binders
Z Adamczyk; Institute. of Surface Chemistry, A. Karwinski; Foundry Institute, Poland
- 24.07 Revitalisation of Expertise in Foundries using Information Technology
C N Bancroft; University of Coventry, UK
- 24.10 Investment Casting of Low Density Turbine Wheels from Nickel Aluminide
I Chequer et al; University of Birmingham, D Henley R&C, S Leyland; Trucast.UK
- 24.11 Mathematical Modelling of Casting Process: Analysis of a Production Case and Rapid Prototyping Case
A Carosi et al; CSM,Italy, D Taccardo; Microcast, France, G Mondadori; Promau, Italy
- 24.12 Mould Non Fill and its Relationship to Mould Wettability and Surface Finish in Walled Castings
S Connolly et al Birmingham University, D A Ford; Rolls-Royce plc. UK
- 24.13 The Investment Casting Industry: Its Structure and Markets
N A J Swanson; Ransom & Randolph, Dentsply Ltd., UK
- 21.14 Prerequisites for the use of Investment Casting to Manufacture Components Currently Produced by other Technologies
M Horaček; Technical University of Brno, J Cileček; Fimes Foundry, Czech Republic
- 21.15 The Market for Investment Casting in Poland
Z Pączek et al; Foundry Research Institute. Poland
- 21.16 Investment Cast Parts via SLS and Selective Laser Sintering Process
S van de Crommert; DTM Corporation. USA
- 21.17 The Drying of Water Base Shell Moulds
P A Withey; Rolls-Royce plc. UK

25th International Conference, 16-19 June, Berlin, 2002

- 25.01 A Review of Investment Casting Market Trend Data
R F Smart; EICF, UK
- 25.02 Current Market Trends – Europe
J-G Déponge; Lajoinie-Fonderie, France
- 25.03 Market Overview – North America
M Perry; Investment Casting Institute, USA
- 25.04 Current Trends of Investment Casting Industry in Far East
K Ishikawa; Japanese Association of Casting Technology, Japan
- 25.05 Prerequisites for Increased Application of Investment Castings – an Aeronautical View
W Entelman & H Frommeyer; Airbus Deutschland GmbH, Germany
- 25.06 The Future use of the Investment Casting Process in the Manufacture of Components for Small to Medium Civil Aero Engines.
S Lee, J Geitner; Rolls-Royce Deutschland, Germany
- 25.07 Investment Casting for High Volume Automotive Production – a Technology with a future.
M Held; AUDI AG, Germany
- 25.09 Building, Maintaining and Securing your Data Assets
R Marengo; Axr8.com, Ltd, UK
- 25.10 Simulation of Die Filling for the Wax Injection Process
J-C Gebelin, M R Jolly; University of Birmingham, UK
- 25.11 Health and Safety Aspects of Investment Casting Waxes
H Fielder, Remet Ltd. UK
- 25.12 Advances in Polymer Enhanced Water Based Primary Binders and Slurries
M J Hendricks et al; Ransom & Randolph, USA
- 25.13 Precision Casting of Gas Turbine Components
U Betz, M Mede; ALD Vacuum Technologies, Germany
- 25.15 Casting Improvements for the Automotive Industry
D W Hofmann, Deloro Stellite GmbH, Germany.
- 25.16 R&D for the Investment Casting Industry
D A Ford; DAF-Associates, UK
- 25.17 The Influence of Processing Parameters and Mould Design on the Quality of Wax Patterns
A Huber et al; Battenfeld Injection Moulding Technology, Austria
- 25.18 Thermophysical Property Data for Investment Casting – What do you need and where do you get it?
R Brooks et al; National Physical Laboratory, UK
- 25.19 Investigation of Wax Expansion using the new Blayson Test Method
D Bond, K Nishikawa; Blayson Olefines Ltd. UK
- 25.20 Improving the Reliability of Aluminium alloy Investment Castings
R A Harding, M Cox; University of Birmingham, UK

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Markets and Business Opportunities

1. State of the Industry – Key Note Speech

P Withey – Chairman of Cast Metals Federation

World Market Review

2. Europe and USA

R Hirst – Blayson Olefines,

3. Chinese Markets

Zhigang Lu – Chinese Foundry Association

4. Japanese Markets

J Take-Uchi Japanese Foundry Society

5. Indian Markets

ModTech Machines

6. Challenges from Aeroengine Manufacturers on Investment Casting Suppliers

O Caballero - ITP

7. Market Opportunities in the Power Generation Sector

D Allen - Alstom

8. *EICF – The First 50 Years*

R Smart

Management and Process Control

9. Successful Turbocharger Wheel Manufacture

S Leyland – Honeywell Turbo Technologies

10. Concurrent Engineering to Develop a Manufacturing Process for Turbine Rear Frame Components

C Duquenne – SNECMA

11. Advantage of Statistical Tools Application in the Foundry: a way to Optimise Productivity and Reduce Costs

A Mourier - UCPI

12. 6 Sigma in Investment Casting. A scientific method for improvement

C Olabe - PCB

13. Simulation assisted optimisation of shell design for investment casting

C Veringmeier – Eurocast bv

14. Self Learning Diagnostic System for Scrap Reduction

R Ransing – University of Wales Swansea

15. How to Become a First Class Investment Casting Foundry: A cost efficient approach to process improvement based on numerical data

J Bedialauneta - PCB

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Pattern and Shell Technology

16. Understanding how Wax Properties can Affect Foundry Performance
P Hancock – Blayson Olefines

17. Profit Begins in the Wax Room
B Phipps – MPI

18. Dimensional Stability of Commercial Shell Systems
P Qusted – NPL, S Jones – Birmingham University IRC

19. A Shell for All Seasons
J Snow – Minco

20. A New Philosophy for Shell Drying
W Weihnacht – Wex

21. Rapid Shell Build: Returning to Basics in an Art Foundry
M Thomas – Birmingham University IRC

22. Alumina and Silico – Aluminate refractories and their role in ceramic mould properties.
D Frulli – Imerys Molochite

Casting and Finishing

23. Investment Casting - Quantum Leap
S Byrne - VA Technology

24. Practical Aspects in Using Simulation for Equiaxed Process, Concerning the use of Insulation and Alloy Composition.
A Carosi

25. Equipment for Large DS and Single Crystal Casting
U Betz – ALD

26. Developments in Superalloy Castability and New Applications for Advanced Superalloys
K Harris – Cannon Muskegon

27. Some Recent Developments in the Melting and Casting of Titanium Alloys
R Harding – Birmingham University – IRC

28. State of the Art Technology in Robotised Grinding Systems.
J Byrne – VA Technology

29. Determination of the factors controlling crystallography non-conformance in single crystal turbine blade production on an industrial scale
J Cameron – Firth Rixson Superalloys

30. Gating System Optimisation. A Design for 6 sigma approach
I Menoyo - PCB