



13th International
Foundry Trade Fair
with WFO Technical
Forum

Düsseldorf
16/06 – 20/06/15

1**Foundry plants and installations, planning, construction, engineering****2****Melting shop****2.1****Cupolas**

2.1.1

Cupolas, coke-fired

2.1.2

Cupolas, cokeless, gas-fired or oil-fired

2.2**Electric melting and holding furnaces**

(pouring equipment see 10.1)

2.2.1

Electric arc furnaces for foundries

2.2.2

Crucible induction furnaces

2.2.3

Channel type induction furnaces

2.2.4

Melting and holding furnaces, electric resistance type

2.2.5

Hearth-type electric melting and holding furnaces

2.2.6

Crucible lifting furnaces

2.2.7

Bale-out furnaces, electric

2.2.8

Vacuum melting furnaces

2.2.9

Other electric melting and holding furnaces

2.3**Fuel-heated melting and holding furnaces**

2.3.1

Crucible melting and holding furnaces, fuel-heated

2.3.2

Hearth-type melting and holding furnaces, fuel-heated

2.3.3

Rotary furnaces

2.3.4

Bale-out furnaces, fuel-heated

2.3.5

Melting and holding furnaces, fuel heated

2.4**Auxiliary melting and melt processing facilities**

2.4.1

Charging plants

2.4.2

Charge preheating facilities

2.4.3

Electromagnetic conveying channels for molten metal

2.4.4

Blowing-in equipment for cupolas

2.4.5

Oxygen addition equipment for cupolas

2.4.6

Inoculation devices, injection equipment

2.4.7

Induction stirring installations

2.4.8

Recuperators

2.4.9

Slag treatment equipment

2.4.10

Melt treatment stations

2.4.11

Inert gas installations

2.4.12

Gas flushing installations

2.4.13

Vacuum degassing equipment

2.5**Melting and holding furnaces, accessories**

2.5.1

Crucibles

2.5.2

Graphite electrodes

2.5.3

Heating wires and heating bars for electric resistance type furnaces

2.5.4

Emergency collecting pit

2.5.5

Other accessories

2.6**Operating materials and supplies for the melting shop**

2.6.1

Foundry coke

2.6.2

Slag-forming additives

2.6.3

Melt additives and covering fluxes for ferrous cast alloys

2.6.4

Melt additives and covering fluxes for non-ferrous cast alloys

2.6.5

Recarburizers

2.6.6

Gas, industrial

3**Refractories technology****3.1****Refractory materials and products, insulating materials**

3.1.1

Refractory ramming mixtures

3.1.2

Refractory bricks

3.1.3

Refractory gating system parts

3.1.4

Insulating materials and products

3.2**Equipment for the lining of melting and pouring equipment**

3.2.1

Compaction apparatus for refractory ramming materials

3.2.2

Spraying machines for refractory material

3.2.3

Break-out equipment for furnace and ladle lining

4**Metallic charge materials****4.1****Charge materials for iron, steel and malleable iron casting**

4.1.1

Pig iron

4.1.2

Scrap, scrap iron

4.1.3

Ferro-alloys

4.1.4

Alloying metals, master alloys

4.1.5

Inoculants

4.1.6

Nodularizing additions for spheroidal graphite cast iron

4.2**Charge materials for non-ferrous metal castings**

4.2.1

Aluminium, aluminium alloys

4.2.2

Magnesium, magnesium alloys

4.2.3

Copper, copper alloys

4.2.4

High-grade zinc alloys

4.2.5

Tin, zinc, alloys

4.2.6

Alloying metals, master alloys

4.2.7

Alloys for thixocasting and squeeze-casting

4.2.8

Non-ferrous metal scraps

5**Moulding and core making****5.1****Moulding machines and plants for bentonite-bonded sands**

5.1.1

Moulding machines

5.1.2

Moulding plants, flaskless

5.1.3

Moulding plants with flasks

5.2**Moulding machines and plants for non bentonite-bonded moulds**

5.2.1

Cold-setting resin moulding processes, equipment

5.2.2

Shell moulding process, equipment

5.2.3

Waterglass process, equipment

5.2.4

Lost-foam processes, equipment

5.2.5

Vacuum moulding process, equipment

5.2.6

Investment casting processes, equipment

5.2.7

Moulding machines and plants, other processes

5.3**Core making machines and plants**

5.3.1

Core blowing and shooting machines and plants

5.3.2

Core making machines, other

5.4**Moulding and core making machines, accessories**

5.4.1

Gassing equipment for moulds and cores



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- 5.4.2 Dosing devices for binders and additives
- 5.4.3 Mould handling equipment
- 5.4.4 Core handling equipment
- 5.4.5 Core treatment equipment (deflashing, coating, drilling), core glueing equipment
- 5.4.6 Automated core/mould manipulation systems
- 5.4.7 Coating preparation
- 5.4.8 Moulding and coremaking machines, other accessories

5.5 Moulding boxes and accessories

6 Moulding sands

6.1 Sands

- 6.1.1 Silica sand
- 6.1.2 Chromite sand and flour
- 6.1.3 Zircon sand and flour
- 6.1.4 Moulding sands with natural clay binder
- 6.1.5 Sands, other

6.2 Moulding sand binders

- 6.2.1 Bentonites and clays
- 6.2.2 Synthetic resin binders for cold setting processes
- 6.2.3 Synthetic resin binders for gassing processes
- 6.2.4 Synthetic resin binders for thermosetting processes
- 6.2.5 Sodium silicate binders
- 6.2.6 Cement binders
- 6.2.7 Binders for investment casting
- 6.2.8 Moulding sand binders, others

6.3 Moulding sand additives, coatings for moulds and cores

- 6.3.1 Lustrous carbon formers
- 6.3.2 Moulding sand additives, others
- 6.3.3 Mould and core coatings

6.4 Moulding sands ready-to-use

- 6.4.1 Precoated sands for shell moulding
- 6.4.2 Bentonite-bonded sands ready-to-use, waterless
- 6.4.3 Moulding sands ready-to-use, others

7 Moulding sand preparation and sand reclamation

7.1 Moulding sand preparation

- 7.1.1 Moulding sand preparation machines and plants
- 7.1.2 Moulding sand mixer
- 7.1.3 Crushing and grinding plants
- 7.1.4 Magnetic separators
- 7.1.5 Measuring and control equipment for moulding sand preparation
- 7.1.6 Sand coolers
- 7.1.7 Sand aerators
- 7.1.8 Sand precoat plants (for shell moulding)
- 7.1.9 Screening machines and installations (silos and hoppers see 15.7)
- 7.1.10 Separators for chromite and silica sand, zircon and silica sand
- 7.1.11 Moulding sand preparation, further equipment

7.2 Sand reclamation, plants and machines

- 7.2.1 Sand reclamation of clay bonded moulding sands
- 7.2.2 Sand reclamation of sodium silicate and cement bonded sands

- 7.2.3 Sand reclamation of synthetic resin bonded sands
- 7.2.4 Crushing and grinding plants for used sand

8

8.1

Pneumatic rammers

8.2

Moulding auxiliaries, general

8.3

Foundry tools

8.4

Mould and core adhesives

8.5

Cores, prefabricated

8.6

Chaplets

9

9.1

Covering compounds for feeders

9.2

Breaker cores

9.3

Filterelements for liquid metals

9.4

Exothermic materials

9.5

Cooling elements

9.6

Strainer cores

9.7

Feeder sleeves

9.8

Other auxiliaries

10

10.1

- 10.1.1 Pouring equipment
- 10.1.1.1 Pouring equipment, mechanical
- 10.1.1.2 Pouring equipment, dosing
- 10.1.1.3 Pouring equipment, heated (pouring furnaces)
- 10.1.4 Pouring ladles
- 10.1.5 Launderers
- 10.1.6 Pig casting machines
- 10.1.7 Pouring equipment and plants, other

10.2

- 10.2 Die-casting machinery and plant
- 10.2.1 Cold chamber die-casting machinery
- 10.2.2 Vacuum die-casting machinery
- 10.2.3 Thixocasting die-casting machinery
- 10.2.4 Squeeze casting die-casting machinery
- 10.2.5 Warm chamber die-casting machinery
- 10.2.6 Complete die-casting plant

10.3

- 10.3 Peripheral equipment and auxiliary materials for die casting (die casting dies see 17.3.1)
- 10.3.1 Ladling and dosing equipment for die-casting
- 10.3.2 Die heater/-cooler units and accessories
- 10.3.3 Die spraying units
- 10.3.4 Release agents for die-casting
- 10.3.5 Operating and auxiliary materials for die-casting



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10.3.6	Extracting equipment for die-castings
10.3.7	Trimming machines for die casting
10.3.8	Trimming tools for die casting
10.3.9	Other accessories for die-casting
10.4	Diecasting machines and accessories
10.4.1	Gravity diecasting machines/plants
10.4.2	Low pressure diecasting machines/plants
10.4.3	Accessories, operating and auxiliary material for diecasting machines
10.5	Centrifugal casting machines and accessories
10.5.1	Centrifugal casting machines
10.5.2	Centrifugal casting moulds
10.6	Continuous casting machines and accessories
10.6.1	Continuous casting machines and plants
10.6.2	Continuous casting moulds
11	Knock-out, fettling and finishing
11.1	Knock-out
11.1.1	Knock-out and cooling drums and conduits
11.1.2	Knock-out machines
11.1.3	Cooling conveyors
11.1.4	Decorating equipment
11.2	Blasting plant and accessories
11.2.1	Pneumatic blast cleaning machines
11.2.2	Airless shot-blasting machines
11.2.3	Pressure water blasting plants
11.2.4	Dry ice blasting machines
11.3	Shot-blasting abrasives
11.3.1	Shot-blasting abrasives, metallic
11.3.2	Shot-blasting abrasives, inorganic, nonmetallic
11.3.3	Shot-blasting abrasives, organic
11.3.4	Shot-blasting abrasives, others
11.4	Fettling installations
11.4.1	Deflashing machines
11.4.2	Sawing machines
11.4.3	Gating and feeding system separator machines and installations
11.4.4	Abrasive cut-off machines and wheels
11.4.5	Fettling facilities, other
11.5	Grinding machines and accessories
11.5.1	Grinding machines, automatic controlled
11.5.2	A-type grinding machines, hand operated or mechanized
11.5.3	Hand-grinding machines
11.5.4	Grinding wheels
11.5.5	Abrasives, others
11.5.6	Grinding technology, others
11.6	Fettling tools and fettling accessories, general
11.6.1	Fettling chambers, fettling benches, fettling cabins
11.6.2	Fettling tools and sundries
11.7	Interlacing and automation of fettling shops
11.8	As-cast casting inspection equipment

12	Surface treatment
12.1	Enamelling plants
12.2	Paint spraying units and tools
12.3	Impregnation plants
12.4	Galvanizing plants
12.5	Surface treatment materials
12.6	Surface treatment plants
13	Welding and cutting
13.1	Flame cutting installations and accessories
13.2	Welding installations and accessories
13.3	Filler metals
14	Heat treating and drying furnaces
14.1	Mould and ladle dryers
14.2	Core drying stoves
14.3	Sand drying plants and stoves
14.4	Heat treating furnaces and installations
14.5	Burners and heaters
15	Transportation and storage
15.1	Trucks, industrial
15.2	Cranes, hoists, rack trucks and accessories
15.3	Pneumatic conveyors
15.4	Roller conveyors
15.5	Oscillating conveyors
15.6	Continuous conveyors (belt conveyors, bucket conveyors and others)
15.7	Bunkers, silos and accessories
15.8	Transport containers, pallets, racks
16	Manipulation
16.1	Manipulators
16.2	Industrial robots
16.3	Manipulators, mechanical



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16.4

Positioning devices

17

Pattern and die making

17.1

Pattern and die making, machines and tools

17.1.1

Wood working machines

17.1.2

Metal machining, machine-tools

17.1.3

Foam pattern production, machines

17.1.4

Spotting presses

17.1.5

Wax pattern injection machines

17.1.6

Patternmaking and die making tools

17.1.7

Cleaning equipment for permanent moulds

17.2

Pattern and die making materials and standard elements

17.2.1

Metals and alloys

17.2.2

Standard elements for permanent moulds and dies

17.2.3

Hot working steels for diecasting dies

17.2.4

Die making, accessories

17.2.5

Heating and cooling devices for moulding and castings tools

17.2.6

Plastics

17.2.7

Ceramics

17.2.8

Pattern wood

17.2.9

Pattern varnishes

17.2.10

Pattern making sundries

17.2.11

Plaster

17.2.12

Investment casting waxes, waxes for wax injection machines, special waxes

17.3

Pattern equipment, permanent moulds and accessories

17.3.1

Diecasting dies

17.3.2

Permanent moulds, gravity dies

17.3.3

Gauges and fixtures

17.3.4

Patterns and core boxes made of wood and plastic

17.3.5

Metal patterns and core boxes

17.3.6

Pattern plates

17.3.7

Lost foam patterns

17.4

Solid Freeform Manufacturing

17.4.1

Object generation, equipment and processes

17.4.2

Rapid prototyping, equipment and processes

17.4.3

Rapid tooling, materials, technologies and processes

18

Control systems

18.1

Process control, models, simulation

18.2

Control equipment, automation technology

19

Measurement and test technology

19.1

Measuring instruments

19.1.1

Temperature measuring instruments

19.1.2

Thermal analysis equipment

19.1.3

Aluminium melt testing equipment

19.2

Scales and weighing machines

19.3

Testing of materials and workpieces

19.3.1

Tightness testers

19.3.2

Endoscopes

19.3.3

Hardness testers

19.3.4

Crack detection equipment, test media

19.3.5

X-ray testing equipment

19.3.6

Ultrasonic testing equipment

19.3.7

Materials testing, further equipment

19.3.8

Surface inspection

19.4

Chemical analyses and metallography

19.4.1

Gas analysis apparatus

19.4.2

Laboratory equipment

19.4.3

Spectrographic analysis equipment

19.4.4

Metallographic testing equipment

19.4.5

Microscopes

19.4.6

Grinding and polishing installations for metallography

19.4.7

Analytical apparatus, others

19.5

Mould and moulding sand testing

19.5.1

Mould testing equipment

19.5.2

Moulding sand testing equipment

19.6

Quality control

20

Compressed-air technology

20.1

Compressed-air plants and accessories

20.2

Pneumatic tools

20.3

Compressors and accessories

21

Exhaust and ventilation technology

21.1

Exhaust systems

21.2

Blowers and fans

21.3

Ventilating and air-conditioning equipment

22

Environmental protection and waste removal

22.1

Flue gas cleaning plants

22.2

Waste water cleaning plants

22.3

Dust extraction systems

22.4

Filters and filter materials

22.5

Operating supplies for waste management plants

22.6

Foundry waste preparation plants

22.7

Pelletization plants

22.8

Residue recycling

22.9

Slag dressing plants

22.10

Water treatment plants



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- 22.11** Environmental protection and waste removal, further installations
- 23** Industrial safety and ergonomics
 - 23.1** Protective clothing
 - 23.2** Body protection
 - 23.3** Alarms
 - 23.4** Protection equipment, other
 - 23.5** Sound control devices
 - 23.6** Work station layout
- 24** Information processing
 - 24.1** Data processing, product development and optimisation software CAD/CAE
 - 24.2** Simulation of casting processes
 - 24.3** Computer programs for the construction of models and moulds
 - 24.4** Software for business and process data capture
 - 24.5** Quality assurance software
 - 24.6** e-business, e-commerce, IT solutions
 - 24.7** Engineering services
- 25** Consultation, planning, services
- 26** Associations, trade publishers, trade journals
- 27** Training, further education