

Metal and Ceramic Injection Molding

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Abstracts

Report Scope:

This report summarizes the global market trends in the MIM and CIM industry. Although the emphasis is mainly on the MIM market, coverage of the CIM market has been expanded from earlier reports. CIM markets are perhaps reaching a level of size where it may be interesting to review the CIM market separately.

The CIM market is still not as widely established as the MIM market. It is a complementary process technology for ceramic manufacturing, among many others. However, we have discovered an increasing number of companies that are actively using CIM and several new CIM companies are added in this report. The market players who are active in CIM are also active in many other ceramic processing methods, which makes it difficult to put meaningful numbers on the industry size.

A more detailed study of the CIM market is included in this report and should provide the reader with a better understanding of the market. 2017 market size (by geography) is also provided.

Many readers had mentioned that technical understanding of the MIM process is still difficult for new entrants and even established companies that want to branch out into new materials and applications. The challenges come from trying to understand binder systems, as these dictate the process equipment and conditions to be employed. To assist with this difficulty, we have incorporated detailed information on binder systems for different materials and several tables of data with technical information related to binder technology.

BCC Research provides the only market report for MIM and CIM technologies that routinely reviews all the patents published in this market. Further, we also review PhD

dissertations from worldwide MIM and CIM technologies. BCC Research also continues to monitor journal articles related to MIM and has incorporated many tables and charts with relevant information from these sources. Companies will benefit from these reviews and analyses as the MIM market is uniquely driven by engineering technology. The MIM market can be difficult for companies wishing to compete through manufacturing excellence. Experience continues to be the key to expertise in this market.

As in our earlier reports, we have separate chapters that cover suppliers and application segments for MIM and CIM products. Estimated values used are based on manufacturers' total revenues. Projected and forecasted revenue values are in constant U.S. dollars, unadjusted for inflation.

The supplier side of the market is crucial to MIM. There are many products that MIM manufacturers buy that are unique to the MIM industry. These products are not widely used in other markets. These include certain grades of metal powder (less than 25 microns in size or metallic microspheres), MIM feedstock and debinding equipment. Companies that support the MIM market with such technologies have benefited from the growth of the MIM market. BASF is a noted example, with their catamold technology of binders, which helped them corner a large share of the global feedstock market.

All major application segments of MIM and CIM are studied in detail. The titanium product market is presented in more detail in this report compared to previous reports. The binder systems used in Titanium MIM are also reviewed in this report. Application markets such as aerospace and medical for titanium MIM are presented. Firearms, one of the largest application markets for MIM, are covered in more detail, with more than 50 U.S. companies that produced more than 10,000 units of firearms in 2016. More detail is provided for 65 dental bracket manufacturers and the computer, communications and consumer(3C) markets, based mostly in Asia.

Report Includes:

24 data tables and 63 additional tables

An overview of the global market for metal injection molding (MIM) and ceramic injection molding (CIM) technologies, covering both powder and liquid processes

Analyses of global market trends, with data from 2017, estimates for 2018 and projections of compound annual growth rates (CAGRs) through 2023

Reviews and analysis of the patents awarded in the MIM and CIM technologies, by technology, by year and by geography; discussion on trends

Detailed analysis of various supplier products and technologies supporting the MIM and CIM marketplace, by technology and by geography; includes comprehensive lists of suppliers by product

Detailed analysis of various application markets for MIM and CIM technologies, such as firearms, medical and dental and watch making; includes comprehensive lists of customers by industry

Descriptions of the diverse products that can be made via powder metal injection molding and thixo-molding technologies, and the different markets for parts, including automotive, aerospace, consumer products, industrial, medical, dental and the 3C industry; materials used in each

Company profiles of the major players of the industry, including Hitachi Chemical Co. Ltd , Nippon Piston Ring Co. Ltd., Rocky Mountain Orthodontics , Small Precision Tools Inc., Zcmim Technology Ltd and Thermal Technology Inc.

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3M

AB TECHNOLOGY (M) SDN. BHD.

ADTECH CERAMICS

ADVANCED MATERIALS TECHNOLOGIES PTE LTD.

ADVANCED METALWORKING PRACTICES LLC

ADVANCED POWDER PRODUCTS, INC.

ADVANCED TECHNOLOGY & MATERIALS CO. LTD.

ADVANTAGE METAL POWDERS, INC.

AFFINITY INTERNATIONAL ENT INC.

Longshan Taida Ltd.
AG Materials Inc.

AKRON PORCELAIN & PLASTICS CO.

ALD VACUUM TECHNOLOGIES AG

ALLIANCE MIM

Metal and Ceramic Injection Molding

AMERICAN CHEMET CORP.

AMERICAN ORTHODONTICS

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Reading Alloys Inc.

AMPHENOL MCP

APG MIM

APPLIED SEPARATIONS

ARBURG GMBH + CO KG

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ARCAM EBM (A GE ADDITIVE COMPANY)

ASHLAND INC.

ATECT CORP.

AUSTRALIAN METAL POWDERS SUPPLIES

AVL METAL POWDERS

AVS INC. (ADVANCED VACUUM SYSTEMS)

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BECKETT MIM LTD.

BESTNER

BLASCH PRECISION CERAMICS

BMI FOURS INDUSTRIELS

BRITT MANUFACTURING CO. (PART OF GREENE GROUP)

C.I. HAYES

CANA-DATUM MOULDS LTD.

CARPENTER POWDER PRODUCTS

CASETEK HOLDINGS LTD.

CASTEM

CATCHER TECHNOLOGY CO. LTD.

CELANESE

CENTER FOR INNOVATIVE SINTERED PRODUCTS

CENTORR VACUUM INDUSTRIES

CERADYNE INC. (PART OF 3M)

CERAMCO INC.

CERAMIC OXIDE FABRICATORS

CERAMTEC GMBH

CERBIDE INC.

CETATECH

CITIZEN WATCH CO.

CLARIANT CORP.

CM FURNACES INC.

CMG TECHNOLOGIES

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COHO BIOMEDICAL TECHNOLOGY CO LTD. (ZIBONE BRAND)

COMOTEC SA

CONTINUOUS METAL TECHNOLOGY, INC.

COORSTEK INC.

CORE-TECH, INC.

CPS TECHNOLOGIES CORP.

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CYPRESS INDUSTRIES

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DEMCON METAL INJECTION MOULDING

DONCASTERS GROUP LTD.

DORST TECHNOLOGIES

DOU YEE TECHNOLOGIES PTE LTD.

DR. BOY GMBH & CO. KG

DSH TECHNOLOGIES, LLC

DURON PLASTICS LTD.

DYNAMIC GROUP

EASEA INTERNATIONAL LTD.

ELEMENT

ELNIK SYSTEMS

EMBE PRODUCTS & SERVICE GMBH

EMIL BRoLL GMBH & CO.

ENGEL AUSTRIA GMBH

EPSON ATMIX CORP.

ERAMET

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FORM TECHNOLOGIES/OPTIMIM (WAS DYNACAST)

FORMATEC TECHNICAL CERAMICS BV

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FW WINTER INC. & CO.

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GKN PLC

GKN Sinter Metals GmbH (MIM)
Hoeganaes Corp.

GLOBAL ADVANCED METALS PTY LTD.

GOCERAM AB

HANSUH MIM TECH CO. LTD

HARDEX

H.C. STARCK

HENRY SCHEIN

HITACHI CHEMICAL CO. LTD.

Hitachi Powdered Metals (U.S.) Inc.

HITACHI METALS LTD.

Hitachi Metals Precision Ltd.

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ISCAR-Microtools Division

ITB PRECISIETECHNIEK

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JIANGXI YUEAN SUPERFINE METAL CO., LTD.

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LTC GMBH

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MATERION

MATHSON GROUP INC.

MAXON MOTOR AG

Maxon Ceramic

MEETU-RAJ INDUSTRIES

MEGAGEN

MERCURY CENTRE

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MICROMOLD INC.

MIKROTECHNIK HIRT

MIM ITALIA SRL

MIM-TECH ALFA SL

MIMECRISA

MIMEST SPA

MIMFORMS LLC

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MORGAN ADVANCED MATERIALS

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NANOVAL GMBH & CO. KG

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Nissei America Inc.

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PHILLIPS-MEDISIZE CORP. (A SUBSIDIARY OF MOLEX)

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ROCKY MOUNTAIN ORTHODONTICS

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SCHUNK SINTERMETALLTECHNIK GMBH

SEMBACH GMBH & CO. KG

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SIMUWU

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SUPERCritical FLUID TECHNOLOGIES, INC.

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Wittmann Battenfeld of America Inc.

WORLD CLASS TECHNOLOGY CORP./ORTHO CLASSIC

WUNDER-MOLD

ZCMIM TECHNOLOGY LTD.

ZHEJIANG YAHONG MEDICAL APPARATUS CO. LTD.

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