

Carborundum Universal Limited

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Chennai - 600 001. India.

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Website:www.cumi.murugappa.com
CIN No.: L29224TN1954PLC000318.

7th June 2017

BSE Limited 1st Floor, New Trading Ring Rotunda Building, P J Towers Dalal Street, Fort Mumbai 400 001

Stock Code: 513375

National Stock Exchange of India Ltd. Plot No. C/1, G Block Bandra - Kurla Complex, Bandra (E) Mumbai 400 051

Stock Code: CARBORUNIV-EQ

Dear Sir/Madam,

Sub: Schedule of meeting with Investors

Further to our letter dated 6th June 2017 intimating the schedule for Investor meeting at Mumbai today, we wish to inform you that the presentation made to the investors is available on the Company's website www.cumi-murugappa.com and a copy is enclosed.

Kindly take the above on record.

Yours faithfully For Carborundum Universal Limited

Rekha Surendhiran Company Secretary

Encl.: a/a







DISCLAIMER



The communication may contain statements relating to future business developments, company's performance and economic performance that may constitute 'forward looking statements'. While these forward looking statements represent the company's judgments and future expectations, a number of factors could cause actual developments and results to differ materially from expectations. The company undertakes no obligation to publicly revise any forward-looking statements to reflect future events or circumstances.







Murugappa Group

An Overview





MURUGAPPA GROUP

INR 300 Billion

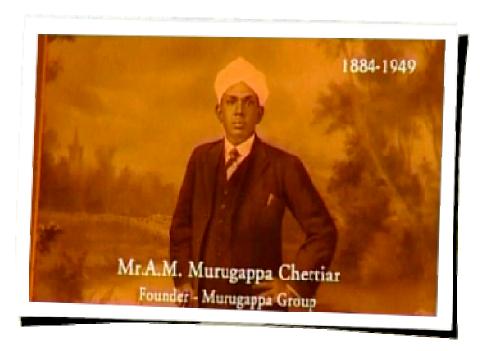
Conglomerate

One of the largest family promoted, professionally managed, diversified business groups





The Philosophy we cherish



The fundamental principle of economic activity is that No man you transact with will lose; then you shall not.



Murugappa Group Today





~ INR 300 Billion Conglomerate

One of the largest family promoted, professionally managed, diversified business Groups...



The Spirit of Murugappa Group







Social Responsibility





AMM Foundation is a non-profit organization run by the Murugappa Group

1% of PAT from Group companies to AMM Foundation

4 Schools, a polytechnic; approximately 10,500 students

4 Hospitals - around 8.15 lakh patients treated last year

Scholarships for needy meritorious students

Scholarships for scholars for pursuing their professional degrees







Carborundum Universal

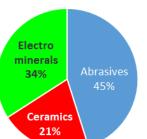


Sales Share

Business Portfolio

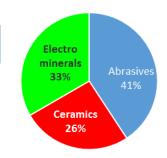


PBIT Share



CUMI – FY 17

Revenue :Rs. 22.3 bnEBIT :Rs. 2.8 bnCapital Employed :Rs. 16.0 bn



Abrasives

□ Revenue : Rs 10.2 bn□ EBIT : Rs 1.1 bn

Capital Employed : Rs 4.6 bn

Ceramics

Revenue : Rs 4.7 bn

□ EBIT : Rs 0.7 bn

□ Capital Employed : Rs 3.7 bn

Electro-minerals

Revenue : Rs 7.7 bnEBIT : Rs 0.9 bn

Capital Employed : Rs 5.5 bn



Abrasion

Industrial Ceramics



Wear Resistance Electro Resistivity

Super Refractories



Heat and Corrosion Resistance

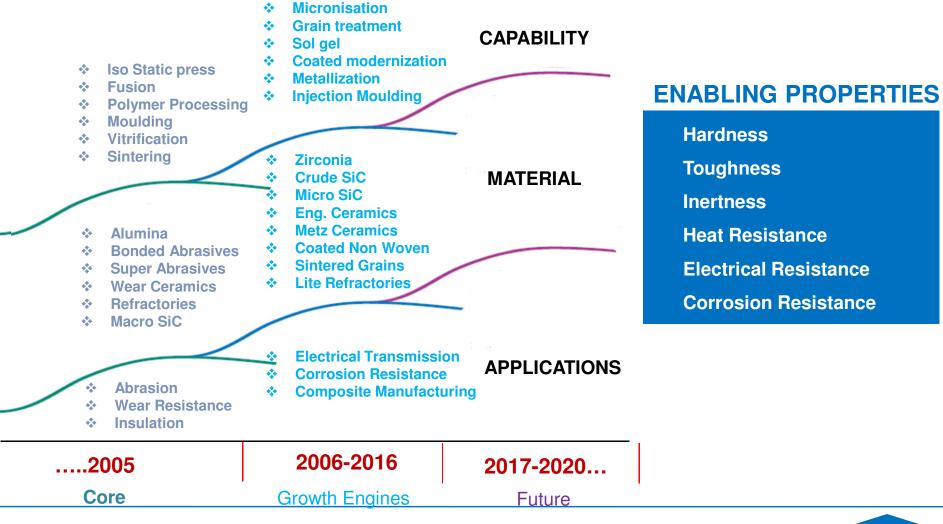


Electro Minerals



The path traversed so far...







CUMI Consolidated



Exports its products to more than 55 countries Over 20,000 varieties of Products 28 manufacturing locations **7** countries Over 5200+employees - 1800+ outside India **Consolidated Gross Sales Rs 2232 cr (FY 16-17)** Market Cap~ Rs. 5600 cr plus



CUMI World Wide- By Business Verticals











NOISION

We will be an Admired Company in Abrasives & Technical Ceramics, driven by Innovation, to create Stakeholder Wealth.

MISSION

Become one of the largest Abrasives (including Super Abrasives) / Technical Ceramics in the Company in the World by 2022.







ABRASIVES







Overview



- Engineering surfaces
- By creating precision surfaces on materials grind to finish
 Design, manufacture and distribute Rigid and Flexible abrasives

Aerospace | Automotive | Auto Comp | Bearing | Steel | Light/Heavy engineering INDUSTRIES General Engineering | Fabrication | Wood Working and Construction **SERVED**







Bonded Abrasives Thin Wheels





Coated Abrasives



Super Abrasives



Metal Working Fluids



Power Tools

Standard Products - made to Stock **Custom Built Products - made on Order**

| To be a leading global player in Abrasives by 2022 Vision

Strategy | Full range abrasives solution provider - Grind to Finish



Standalone operations - CUMI India



Chennai Plant -1954 • 52 Acre



Hosur Plant - 1979

- 15 Acre
- Custom Built Products Std. Vitrified Products







Roorkee Plant - 2007





- 9 Acre
- Thin Wheel Mfg. across sizes

BUSINESS Sriperumpudur Plant



Coated Plant

COATED



Maraimalai Nagar Plant

- Processing of Cloth / Paper
- •Manufacture of Phenolic / Alkyd Resins



EAL Plant, Kolkatta

Coated Plant



Subsidiaries / Associates – Mfg. Locations



STERLING ABRASIVES

WENDT INDIA

VOLZHSKY ABRASIVE WORKS - RUSSIA





























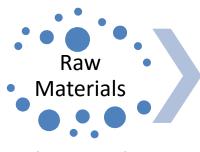












Abrasives Manufacturing



Distribution Channel



Application



End-Users

- Aluminum Oxide
- Silicon Carbide
- Zirconia
- Boron
- Garmet
- Others

- Bonded Abrasives
- Coated Abrasives
- Super Abrasives
- Other Abrasives

- Retailers
- Wholesalers
- Direct Sales
- Supply Agreements
- Online Portals

- Cutting
- Grinding
- Polishing
- Lapping
- Buffing
- Others

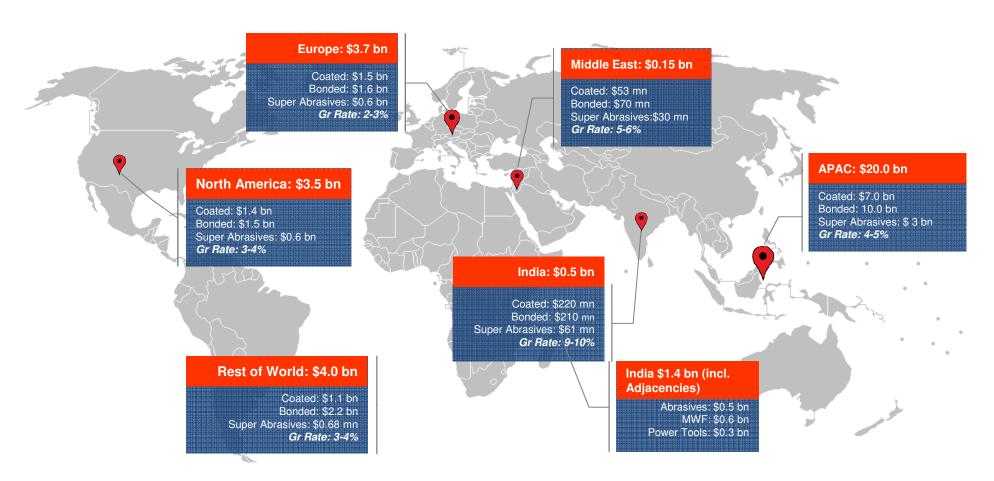
- Automobiles
- Machinery
- Metal Fabrication
- Construction
- Transportation
- Electronics
- Steel
- Bearings
- Aerospace
- General Engg.
- Wood working
- Others



Global Abrasives market Size



Total Market Size Estimate ~ \$33.0 bn, growing at a CAGR of 3-4%



Source: Techanvio Market Report & internal findings



Global Abrasives market drivers



Europe • Emergence of Central China **North America** and Eastern Europe as High speed rail network **Automotive hub** • Creation of satellite towns • Increased usage in metal fabrication, transportation sectors India • Rapid urbanization & resultant growth in Revival of housing infrastructure, construction, auto industry market High productivity • Make in India Initiative Middle East • Spend on infrastructure Move towards non-oil economy to open industrialization • Iran Opening up



Global Abrasives market: Success factors





Source: Techanvio Market Report & internal findings



Megatrend: urbanization



2012

53 rural; 219 transition; 84 semi—urban and 33 urban districts:

12 very high and high performing states — 50% of India's GDP and 58% of consuming class households

5 metropolitan districts — 26% of population, 45% of consuming class households, 40% of GDP and 37% of consumption

49 clusters contribute 70% of GDP

2025

96 rural; 220 transition; 115 semiurban and 58 urban districts

8 high performing states to contribute 52% of incremental GDP

89 million consuming class households and 45 million first time aspirer households in India

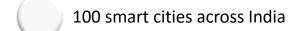
79 metropolitan districts spread across 427,000 km2 provide same economic opportunity as 8 high performing states spread across 794,000 km2

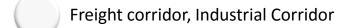


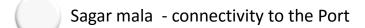
Opportunities for CUMI Abrasives



Infrastructure









National Optical fiber network up to the village level



Diamond Quadrilateral project – Bullet train



Steel Industry - Roll Grinding wheels



Auto Refinishing - Coated



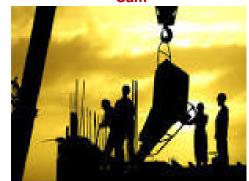
General Engineering – Off hand/ tool room wheels



Fabrication - Thin wheel



Auto & Auto Components - Crank/ Cam



Construction Industry- Thin wheels/ super abrasives



Opportunities for CUMI Abrasives



Energy Scarcity

- Oil-1 mbpd to be added
 - Gas 135 bcm to be added
 - 1000 TeraWh to be added
 - Thermal / Nuclear will dominate
- Renewable energies will rise
- Turbine grinding
- ☐ Zircon alloy grinding in the nuclear energy space
- Fabrication
- Wind Mill Fabrication









Opportunities for Abrasives



End User Industry	Major Product Segments of Abrasives
Steel Industry & non-ferrous	Roll grinding wheels, hot press, snagging wheels, large dia reinforce cut off
	wheels, metalworking fluids and so on
Construction	Thin wheels, power tools, sheets and rolls and super abrasives and so on
Fabrication	Thin wheel, power tools, flap discs and mops
General Engineering	Offhand / tool room wheels, non-woven industrial pads, thin wheels, super
	abrasives, metalworking fluids and so on
Wood Working	Coated Abrasives: Discs, wide belts, sheets and rolls and so on
Automotive, Aerospace and	Crank/cam shaft grinding wheels, Centreless grinding wheels, Gear Grinding,
Transportation	Bearing, F type wheels, fine finishing coated abrasives, super abrasives, ball
	grinding and lapping, honing products, non-woven (convolute type wheels,
	unitized wheels etc), creep feed grinding and metalworking fluids
Home Care & Health care	Non-woven abrasives, non-woven fabric, abrasives for Stainless steel
	fabrication etc









Capability to produce all varieties of 7" / 9" DC / RFC -to address both Domestic and Export markets.

Expansion in Coated Operations - Kolkata



VAW expansion to Coated Business









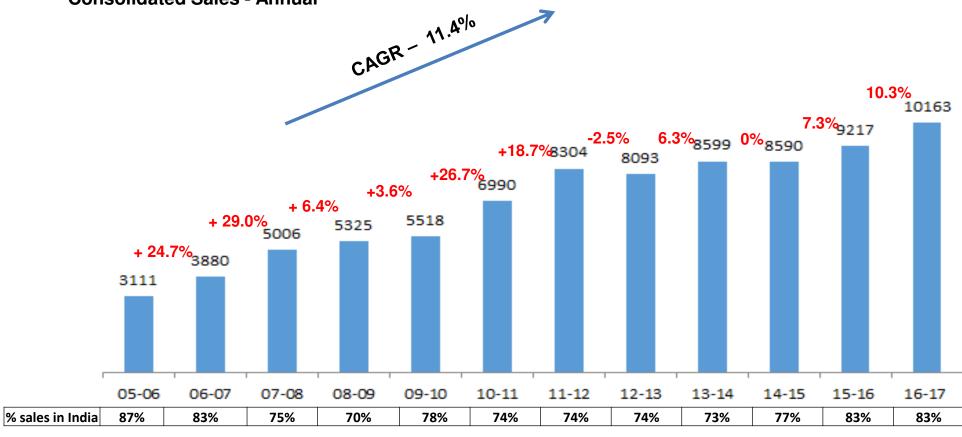




ABRASIVES – Performance



Consolidated Sales - Annual





Industrial Ceramics

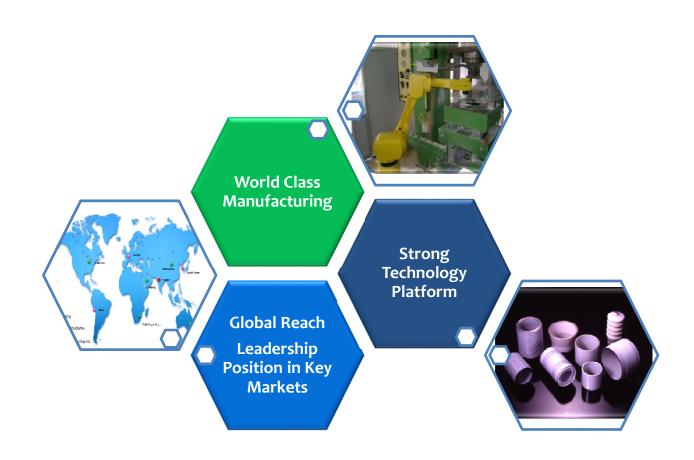






Industrial Ceramics







Steel

INDUSTRIAL CERAMICS - Product Range



Industrial SBU > Ceramics Wear **Technical** Business Ceramics Ceramics Group **Product Lines** Grinding Wear Lined Engineered **Metallized Ceramics** Media Resistant Equipment Ceramics Liners ■Bulk Material Handling •Fluid Handling ■Vacuum Markets and ■Ceramic Tile/Mineral Processing Battery Tooling Interrupters **Applications** ■Coal Based Thermal Power ■Ignition System ■Solid Oxide Fuel •Mining ■Ballistic Protection Cells Cement ■Night Vision Customized Ceramic

products

Cameras

Devices

Communication











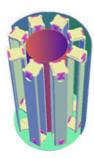
Metallized Ceramics



Engineered Ceramics



Automotive Ceramics



SOFC Ceramics



Non oxide ceramics



Zirconia / Thermal Ceramics



Ceramic Injection molding



Metal Matrix Composites



Ceramic mini-media



Medical Ceramics



Aesthetic Ceramics



Widening of Product Offerings



Industrial Ceramics







Ceramic lined rubber hose and other new products









Technical Ceramics



Inauguration of New DSIR Certified R&D



Set up a state-of-the-art Research and Development facility for Advanced Ceramics

New R&D

Inaugurated by Chairman Mr M M Murugappan in presence of Director of NAL and SAC – ISRO in August 2016



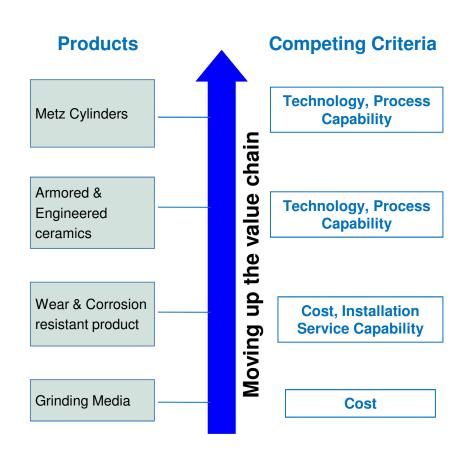


Strategy pursued - Moving up Value Chain



Industrial Ceramics

- Currently we are in the business of Alumina based Ceramics. We constantly look at extending offerings in that range and target newer industries.
- Move up the Value Chain constantly by offering high value products. We have been actively pursuing the same as depicted in the picture alongside.
- Build customer facing entities as we have in Australia to provide end to end solutions in other geographies – South Africa / North America.
- Grow in Ceramic medical business





Impact of Megatrends



Infrastructure





Mining



Power Generation



Power Transmission



• Wear

Protection

Metallized Cylinders



Impact of Megatrends



Global Rebalancing



Emergence of Affluent



Manufacturing





Healthcare



- Wear Protection
- Metallized Cylinders
- Engineered Ceramics













Mullite Refractories

High Alumina Refractories

Zircon & Zirconia-Mullite Refractories



CUMILITE



CUMILOX



CUMIZON & CUMIZITE

USER INDUSTRIES	APPLICATION	
Carbon black	Reactor lining	_
Cement	Rotary kiln lining	
Ceramics, Petrochemicals, Fertilisers, Steel.	Burner blocks	
Ceramics, Metallurgical industries	Heating element carrying plates	
Electro ceramics, Advanced ceramics	Kiln lining & Kiln furniture	
• Glass	Regenerator Target wall / Division wall	
	Port Neck Arches	
	Rider Arch & Spenner tiles	
	Forehearth super structure	



USER INDUSTRIES	APPLICATION					
• Fertiliser	Secondary reformer and gas generator lining					
Fertiliser	Catalyst bed support					
 Foundry 	Channel induction furnace lining					
 Alloy Steels 	Secondary refining vessels lining					
Steel	Ladle nozzles, Well blocks and sleeves					
• Electro Ceramics	Reheating furnace hearth Skid Rails					



APPLICATION					
CUMIZON for Melter Bottom Blocks,					
Filler Blocks below silica crown skew Blocks CUMIZITE for					
Forehearth sub structure					
Borosilicate furnaces:					
Forehearth superstructure					
Spout burner blocks					
Regenerator Top checkers					
Regenerator top checkers Regenerator Crown.					



SUPER REFRACTORIES





CUMIFRAC





Nitride Bonded Silicon Carbide Refractories



CUMIREX & CUMISTAR

USER INDUSTRIES	APPLICATION					
• Ceramics	Kiln furnitures, Burner tube					
Aluminium	Aluminium reduction cell lining, Tap-out blocks					
Copper	Shift Furnace lining, Launder, Thermocouple sheath					
• Iron & Steel	Blast furnace lining.					



Insulation Refractories



CUMILAG

APPLICATION					
High temperature kiln hat face / backup lining					
Laboratory kiln hot face lining					
Primary reformer and hydrogen transfer lines					
Blast furnace stoves					
High temperature oir pre-heaters and secondary reformer cold face					
Pusher type furnoce lining					





SUPER REFRACTORIES- Product Range



CUMI Refractory Products







Fired products

Silicon Carbide (CUMIFRAC)

> Nitride bonded Silicon Carbide

Mulite (CUMILITE)

High Alumina (CUMILOX)

Zirconia Mullite and Zircon (CUMIZITE & CUMIZON)

> Insulation Firebricks (CUMILAG)

Monolithics

Conventional Dense Castables (CUMICRETE)

Insulation Castables (CUMICRETE Light Weight)

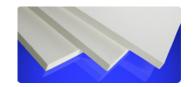
Low cement castables (CUMIHICAST & CUMIPLASCAST)

Self Flow Castables (CUMIFLOW &CUMICAST EF)

Ramming Mass (CUMIRAM)

Laying Mortars (CUMI Bond)

Precast Shapes



Fibre Refractory JV with Morgan





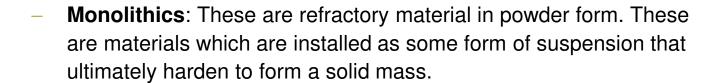








- Refractory is any material that can withstand high temperature. CUMI is into High Alumina, Silicon Carbide, Zirconia based refractories which are capable to withstand very high temperature:-
 - Fired Refractories: Is a block of refractory ceramic material used in lining furnaces, kilns & fireplaces. A refractory brick is built primarily to withstand high temperature.



The division also manufactures and sells Anti-corrosive products:
 Corrosion is a degradation of materials' properties caused by chemical reaction with their environments. Anti-corrosive products are used in plants/ products which undergo such corrosion.









SUPER REFRACTORIES - Application



Ceramic Industries

Insulators

Sanitaryware & Tableware

Abrasives

Wall Tiles

Refractories

Electro Ceramics

Glass

Container

Soda-lime

Boro-silicate

Decorative

Fibreglass

Chemical Process Industries

Carbon Black

Fertilizer

Petro-Chem. / Refinery

Cement

Power Generation

Boiler

Non – Ferrous

Aluminum

Copper

Zinc

Iron & Steel

Sponge Iron (DRI)

Gas-Based

Coal - Based

Foundries





















Ability to manufacture complex shapes and meet all surge requirements













murugappa

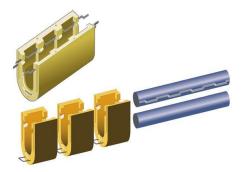
Reheating Furnace – Skid & Pipe (Pre-Cast)







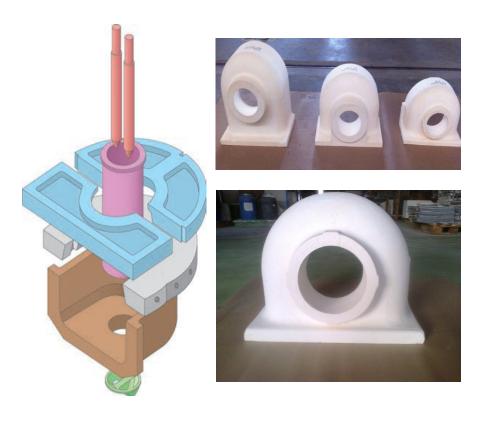


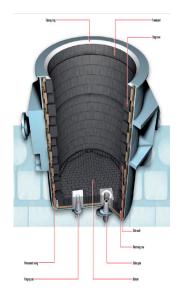




Glass Sprout and Slide Gate











Tundish Nozzle



Ladle Nozzle







Opportunities for CUMI CERAMICS (IC+SR)









Coal Washeries

Ceramics for Steel

Reheat/ Heat Treatment

Forging Furnaces



Annealing



Process Gas Heaters



Glass Melting Furnace



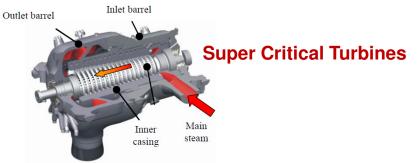
Gunning



Opportunities for CUMI CERAMICS (IC+SR)







CFBC Boilers



Circulating Fluidised Bed Combustion Boiler







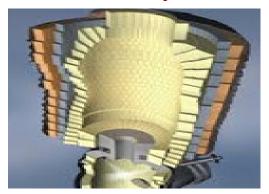
High Alumina Ceramics for Renewable Energy





Passive Fire Protection

Gasification Projects



Ceramics for SOFC

FGD Systems





Refractory Ranipet Lab



Recognized by DSIR

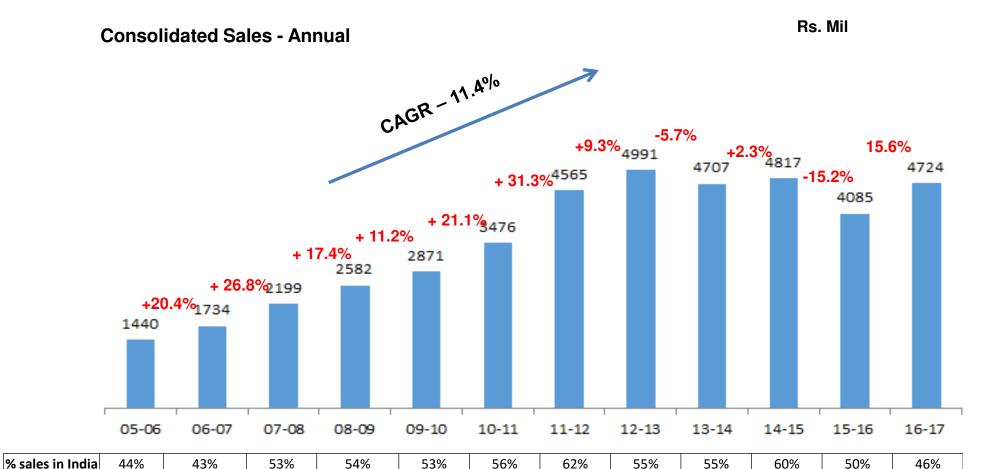


CUMI – Ranipet : R&D lab recognized by Department of Science and Industrial Research (DSIR), Government of INDIA.



CERAMICS - (Industrial Ceramics and Refractories) Performance















ELECTRO MINERALS









ELECTROMINERALS – Product Range





Brown Fused Alumina

Coated

Abrasives

White Fused Alumina Silicon carbide

Zirconia

Specialty minerals



Bonded **Abrasives**



Refractory



Metallurgical



slicing



Investment casting



Floor Laminates

Surface Engineering

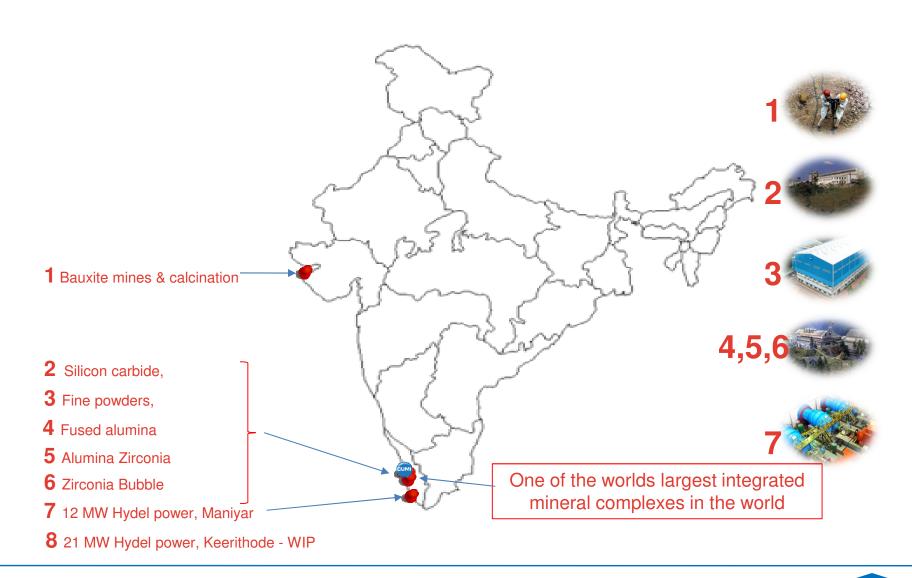
Refractories

Energy & Environment



ELECTROMINERALS – Facility







ELECTROMINERALS – Overseas Facility









Global Capacity and Our Share

- Silicon Carbide
 - Global capacity is ~ 2 million tonnes. Price and Cost movements, macro factors, keeps these facilities either running or closed.
 - With 80k tons per annum in VAW we are the second largest after Saint Gobain
 - Around 50% of the capacity is in China, with no single identifiable big player
 - Around 40% capacity is in China
- Fused Aluminas
 - Global capacity is ~ 1.7 million tonnes
 - CUMI share is 1%
 - Around 50% of the capacity is in China

Current Standing Point

- Established leadership in Russian and Indian market
- Locational advantage in Russia by way of low power and pet coke cost providing significant cost competitiveness in SiC business
- In Speciality products, CUMI has achieved leadership in this business by way of improving process capability and Micronisation

Strategy

- Leadership in key fused minerals based on cost competitiveness and processing capability
- Technology driven manufacture of Specialities Solgel, Semifriable, AlZr etc
- Develop business around capabilities in Mining, Grain treatment etc
- Build Cellaris (Nebulox) as a one-of-its –kind product



ELECTRO MINERALS – Future Strategy







EMD Business Opportunity



Environment

Euro 6
Demand for water

SiC for DPF
SiC and Alumina for
Filtration

Energy

Nuclear Energy Mobile energy Renewable energy

Zirconia
SiC
Graphite
Thermal Powders

Urbanization

Infrastructure
Transportation
Housing

Abrasives
Refractories
Thermal Powders









Capacity Expansion Both Tilt and Pot Fusion plant has been commissioned





















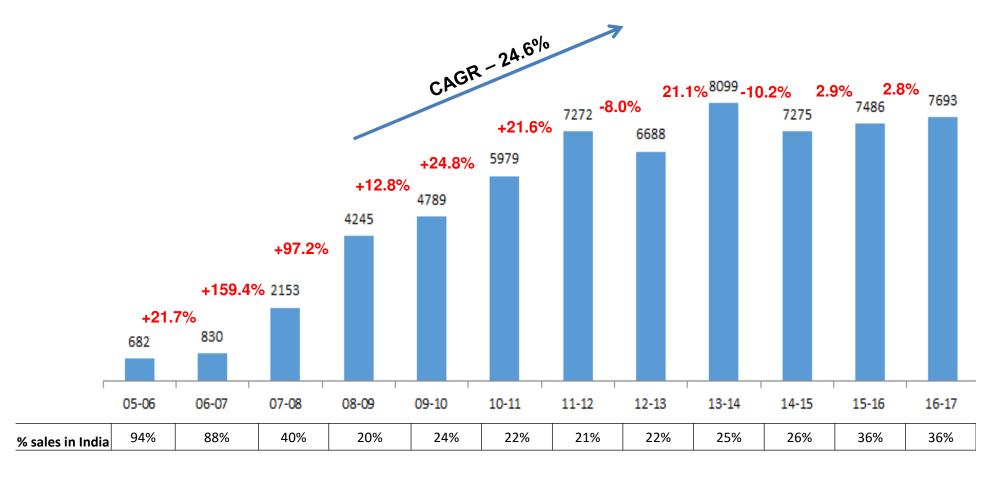




ELECTRO MINERALS - Performance







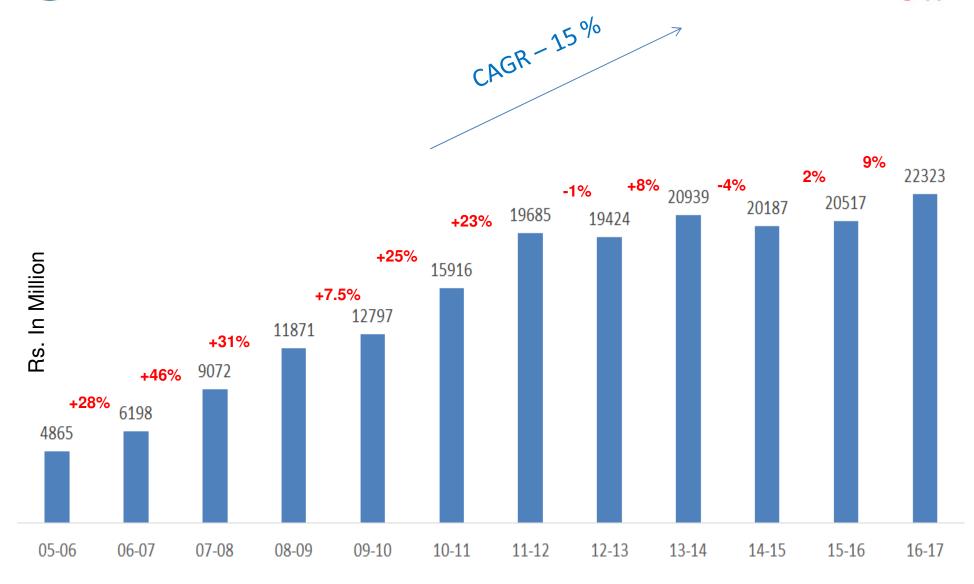




FINANCIALS





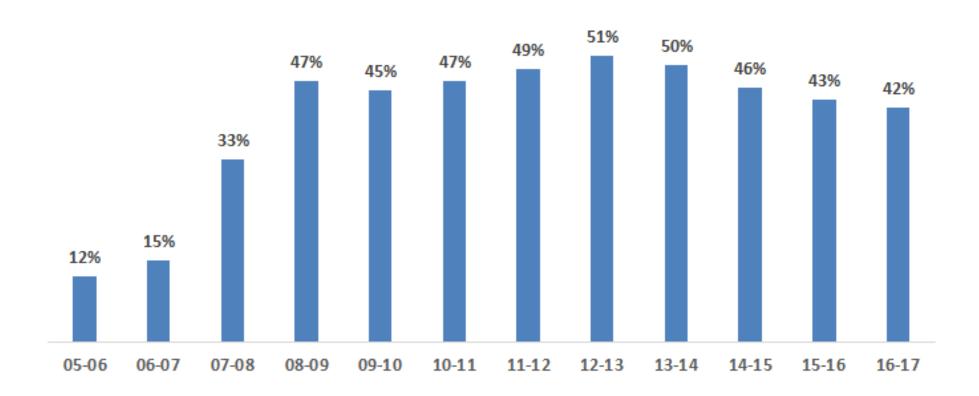




International Revenue share (%)



International Revenue share %





Segmental Performance



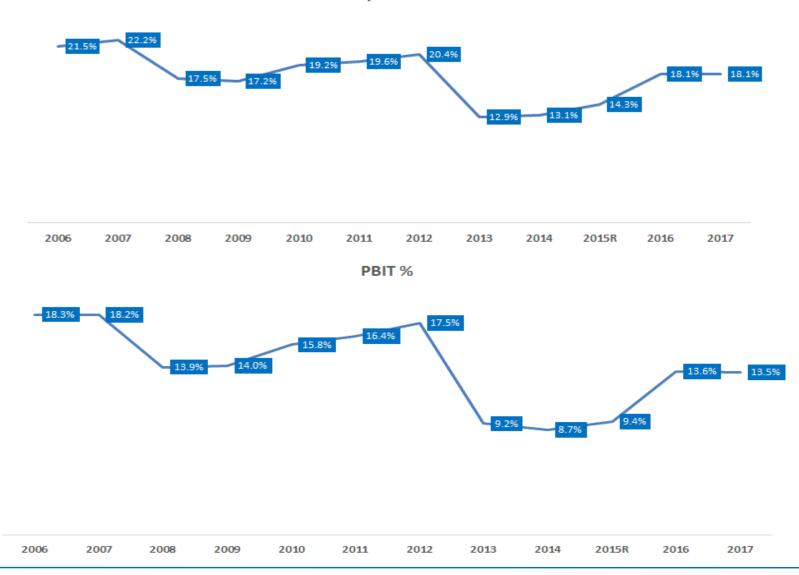
Sales (Rs. Mil)	FY 06	FY 07	FY 08	FY 09	FY 10	FY11	FY 12	FY 13	FY 14	FY 15	FY16	FY 17
Abrasives	3214	3880	5006	5325	5518	6990	8304	8093	8599	8590	9217	10163
Ceramics	1130	1734	2199	2582	2871	3476	4565	4991	4707	4817	4085	4724
Electro minerals	681	830	2153	4245	4789	5979	7272	6688	8099	7275	7487	7694
Inter segment	-311	-351	-382	-370	-596	-704	-773	-737	-830	-927	-1059	-1240
Others	151	116	116	148	241	266	316	389	364	432	515	659
Sales	4865	6210	9093	11930	12823	16007	19685	19424	20939	20187	20244	21999
PBIT Margin (%)	FY 06	FY 07	FY 08	FY 09	FY 10	FY11	FY 12	FY 13	FY 14	FY 15	FY16	FY 17
Abrasives	16.3	16.0	13.4	9.8	9.4	13.7	15.0	10.3	7.0	7.2	9.0	11.1
Ceramics	19.7	22.5	20.0	20.3	19.4	17.6	19.7	15.8	12.5	14.7	12.3	14.9
Electro minerals	21.8	18.4	12.1	17.9	21.5	18.4	19.2	3.5	10.0	10.9	17.0	11.8
Total	18.9	19.2	14.5	13.7	15.8	16.4	17.5	9.2	8.7	9.4	12.7	12.5



Performance Ratios



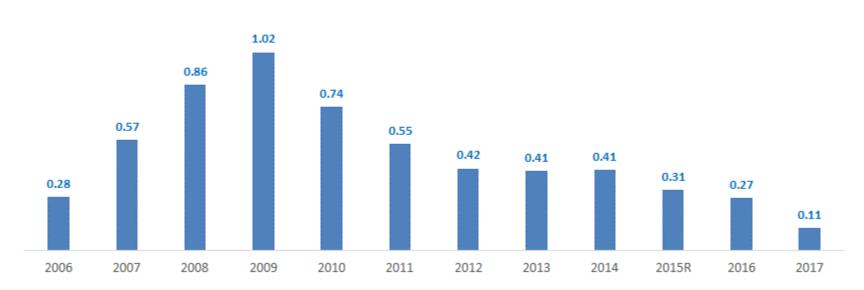
EBITDA / Net Sales %







Debt Equity Ratio

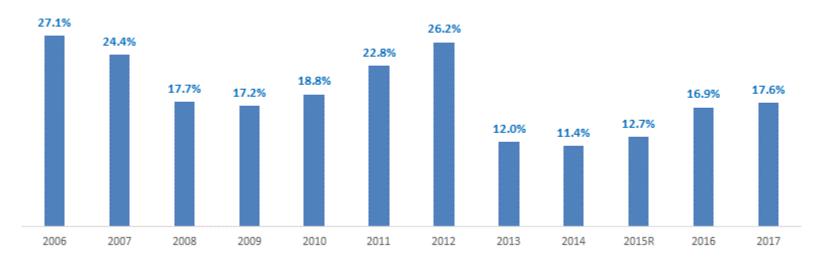




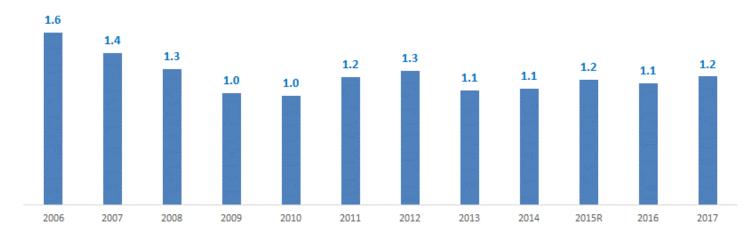
Performance Ratios



Return on Capital Employed %



Asset Turnover times





Investor Friendly Company



- 43.76% held by the Murugappa Group, 27.41% held by FII's, MF, PE, Insurance Cos
- 63 years of unbroken track record of Profit and Dividend
- Six Bonus Issues since inception 89% of the current Equity is by way of capitalization of Reserves
- Growth over the years entirely funded by Debt, Internal accruals and by unlocking value
- Investor / Analyst Interaction
 - Quarterly Earnings Call and Transcripts upload
 - Minimum 2 investors Presentation in Mumbai and Abroad
 - Bi Annual Communication on company performance sent to all investors
 - 100 plus investor visits / tele conference in a year



GST Impact on CUMI businesses



Abrasives

- Non excise paying companies will now become more expensive.
- In channel products, operating prices will go up by at least 5 to 8 % with greater compliance.
- Industrial Ceramics and Super Refractories
 - Nearly all sales are to corporate/ project customers. However, Operating prices likely to go up with greater compliance.

❖ EMD

- Most sales are to corporates.
- The big players are the traders offering material from China / Vietnam.
- Over all operating prices will go up with greater compliance.



















Indonesia













Sharjah / Dubai Steel / Fab











Ceramics Expo in Japan Hannover Fair 2017









CUMI America participating in an Exhibition







CSRHoning Skills, Helping Lives









Currently 175 trainees in total undergoing the skill and technical training in the centers at Hosur and Edappally CCSD

- 1. Educational Sponsorship for Economically Deprived Children
- 2. Key Children Project-for Child Development
- 3. Adopted Schools and Communities in Thiruvottiyur and Ranipet
- 4. Solid Waste Management Program to improve the overall health of the community





CSREngaging Employees and Community



Environment Task Force was formed at involving employees

The objective is to bring in ownership among employees towards improving environment performance

The role of the Task Force is to oversee the Environment conservation, Implement new practices, Improving employee awareness etc

Various teams for specific assignments like green belt improvement, Shop floor improvements have been formed

Green Belt Improvement was initiated at plant premises

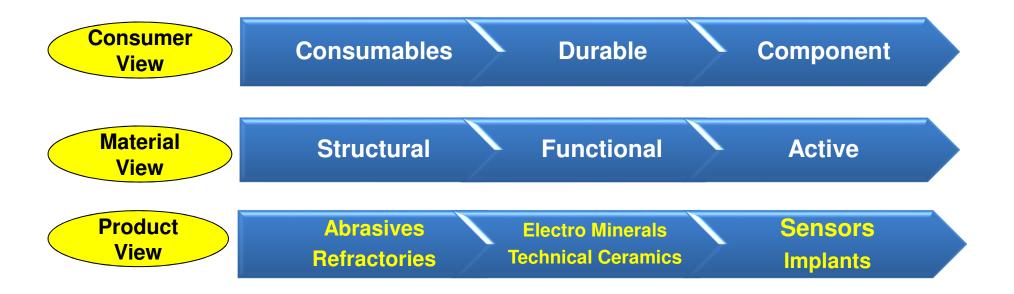








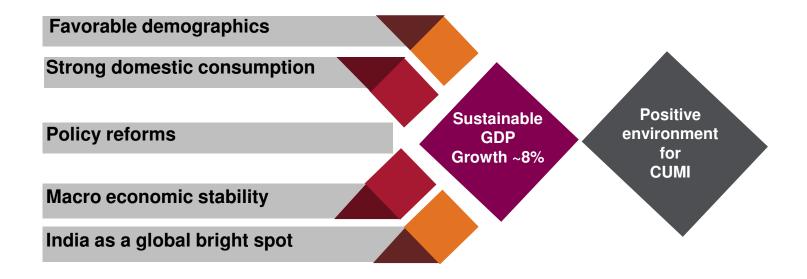




Evolving from Passive to Interactive Materials...











THANK YOU

