

1st Operating Committee meeting on R&D



11th June 2016

SAIL Corporate Office, New Delhi

Operating Committees



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Eight Operating Committees functioning :

- Coal Coke & Chemicals,
- Sinter Plant and Blast Furnaces,
- Steel making,
- Refractories,
- Rolling Mills,
- Energy
- Automation & Information technology
- Environment

All major steel plants are members and Secretary is from RDCIS SAIL

Operating Committee Meetings



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Meetings held once / twice a year :

- Sharing of experiences and best practices on specific areas**
- Sharing of plant operating data**
- Discussion on innovative ideas implemented, solutions to specific problems with case studies**
- Recommendations given for parallel transfer of good practices from one plant to another**

Operating Committee on R&D



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In the recently held Governing Body Meeting of SRTMI on 29th March 2016, Secretary Steel, MOS suggested for creation of an Operating Committee on R&D:

- **Need to share R&D innovations across the different steel plants**
- **Share expertise and facilities for solving common problems and adopting best practices**
- **Evolve major R&D programs of high impact and national importance**

Nominated Members of Operating Committee



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Organisation	Member/Alternate Member
JSW	<ol style="list-style-type: none">1. Dr. Marutiram Kaza, Head (R&D)2. Dr. Manjini Sambandam : Alt. Member
Tata Steel	<ol style="list-style-type: none">1. Dr. Sanjay Chandra, Chief (R&D & Scientific Services)2. Dr. Atanu Ranjan Pal, Chief (Process Research): Alt.Member
Essar	<ol style="list-style-type: none">1. Sirshendu Chattopadhyay, GM (R&D)
NMDC	<ol style="list-style-type: none">1. Rajan Kumar, Head (R&D)2. G E Sreedhar, AGM (R&D) : Alt. Member
RINL	<ol style="list-style-type: none">1. Dr. A. Syamsundar, DGM & I/c (R&D)2. M B Venkata Rao, AGM (R&D): Alt. Member
MECON	<ol style="list-style-type: none">1. Dr. S Chatterjee, Jt. GM (R&D)2. A. K. Agrawal. DGM (Met. Wing): Alt. Member

Nominated Members of Operating Committee



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Organisation	Member/Alternate Member
DMRL	1. Dr. R. Balamurali Krishnan, Sc. G & Head (Special Steel Gr.)
IMMT	1. Dr. S. K. Biswal, Chief Scientist 2. Dr. B Bhoi, Chief Scientist: Alt. Member
NML	1. Dr. Amitava Mitra, Chief Scientist 2. Dr. S. Tarafder, Chief Scientist : Alt. Member
MIDHANI	1. K. Sivasubramanian, GM (R&D) 2. S. Narahari Prasad, Addl. GM (R&D) : Alt. Member
RDCIS	1. A K Paul, GM & I/c : Member Secretary

Objective



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- ❖ **Facilitate synergy and strategic alliance between R&D Organisations to promote cutting edge research and development in areas of national interest.**
- ❖ **Formulate national level programs on new technology development utilising the expertise of the participating organisations.**

Challenges before Indian Steel Industry



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- **Technological performance of Indian Steel Plants are lower than international benchmarks**
- **Shortage of good quality raw materials**
- **Dependence of imported raw materials eg. coal**
- **Higher specific energy consumption**
- **Environmental norms becoming stricter**
- **Threat of competing alternate materials**
- **Dependence on imported manufacturing technologies for expansion/modernization**

Scope of Committee



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- **Share major research programs being carried in-house.**
- **Evolve R&D programs of national importance.**
- **Initiate development of products of strategic importance in line with Make In India programme.**
- **Undertake indigenous disruptive technology development programs attuned to our resources.**
- **Share new technologies introduced, difficulties faced, interventions to overcome them and technological impact.**
- **Provide inputs on collaborative research work being carried out jointly with academia & research lab in India & abroad.**

Scope of Committee



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- **Promote knowledge upgradation and expertise building in operating and R&D personnel**
- **Facilitate development of indigenous capabilities for design/engineering and equipment manufacturing for steel plants**
- **Evolve product development plan on a national perspective.**
- **Step up R&D investments for the steel industry to 1% of turnover in a phased manner**
- **Provide expert recommendations on projects/proposals submitted to SRTMI/SIAI**

Priority Areas of National Importance



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- ❖ **Optimum usage of raw materials and conservation of natural resources**
 - Technologies to maximize recoveries from low grade ores by novel methods
 - Technologies for recovering iron content from slimes and finding alternate use of slimes
 - Use of high ash non coking coals for coke making

- ❖ **Energy & Environment**
 - Development of optimum energy consumption and emissions for each of the steelmaking processes
 - Technology to produce synthetic coke
 - Technologies for heat recovery from blast furnace and steel slags
 - Carbon dioxide sequestration and reduction in emission levels

Priority Areas of National Importance



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- ❖ **Augment design and manufacturing capabilities**
 - Indigenous development of main operating unit of higher capacities
 - Regenerative burners for reheat furnaces
- ❖ **Product development of strategic and national importance**
- ❖ **Value addition of slags.**

Functioning



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- ❖ **The Committee may meet once / twice a year in any member steel plant / research organisation location**
- ❖ **Specific topic/theme to be selected for each meeting**
- ❖ **Experts related to topic from industry / academia may be invited**
- ❖ **Session on sharing of R&D innovations / Success stories**
- ❖ **Discussion on new R&D initiatives in strategic and futuristic areas**
- ❖ **Monitoring progress of any joint projects undertaken**
- ❖ **Recommendations to be evolved in each meeting**

Way Forward



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- **Formulation of an approach note on operating committee on R&D which shall include:**
 - **Objective**
 - **Scope & broad guidelines**
 - **Priority areas of national importance**
 - **Linkage with SRTMI and SIAI**
 - **Methodology of identification & selection of programs of National Importance**
 - **Development of expert team/domain experts**
 - **Networking between participating organisations**
 - **IPR issue, if any**

" THANK YOU "

**Best replacement for Steel –
BETTER STEEL**

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