

**Import plan for Online Coal Analyzer in India(Vision 2020):  
A Mapping report**

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## India's Import plan for Online Coal Analyzer:

### ➤ Introduction

Online coal analyzer is an on belt analyzer that provides realtime, continuous data on total ash, elemental property and Gross calorific value in coal during conveying. This instrument comes under category of “**Online Analytical Instrument**” segment. The market is segmented based on various product types such as process chromatographs, process spectrometers, process gas analyzers, and process liquid analyzers, with a market share of 28.9%, 19.7%, 19.6%, and 31.8%, respectively. Asia-Pacific (APAC) is growing steadily at a CAGR of 5.7%. To increase penetration, key participants are targeting the APAC region.

### ➤ Total Process Analytical Instrumentation Market: Global, 2013 :

Market Stage	Market Revenue	Market Size for Last Year of Study Period	Base Year Market Growth Rate
Mature	\$2,769.3 M (2013)	\$3,780.8 M (2020)	4.3%

Compound Annual Growth Rate	Customer Price Sensitivity	Degree of Technical Change	Market Concentration
4.5% (CAGR, 2013-2020)	8 (scale:1 [Low] to 10 [High])	7 (scale:1 [Low] to 10 [High])	25.1% (% of market share held by top 3 companies)

Decreasing	Stable	Increasing
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Source : Frost & Sullivan

➤ **Process Analytical Instrument Market: Key drivers, Global 2014-20 :**

Drivers	1–2 Years	3–4 Years	5–7 Years
<b>Demand for online analyzers with enhanced features and performance is growing</b>	H	H	M
<b>Emerging markets</b> drive the demand for process analyzers	H	H	M
<b>Shale gas production in the United States</b> will increase the demand for process gas analysis	H	H	M
<b>Growing competitiveness</b> will meet global quality standards	H	H	M
<b>Environmental concerns and stringent regulatory authorities</b> boost demand for analytical instrumentation	M	H	M

Restraints	1–2 Years	3–4 Years	5–7 Years
<b>Engineering, procurement, and construction (EPC) firms</b> constrain process analytical instrumentation vendors	H	H	M
<b>The high maintenance requirement of the process analyzers</b> disappoints end users	H	H	L
<b>Shortage of skilled labor</b> hinders the process analytical instrumentation market	H	M	M

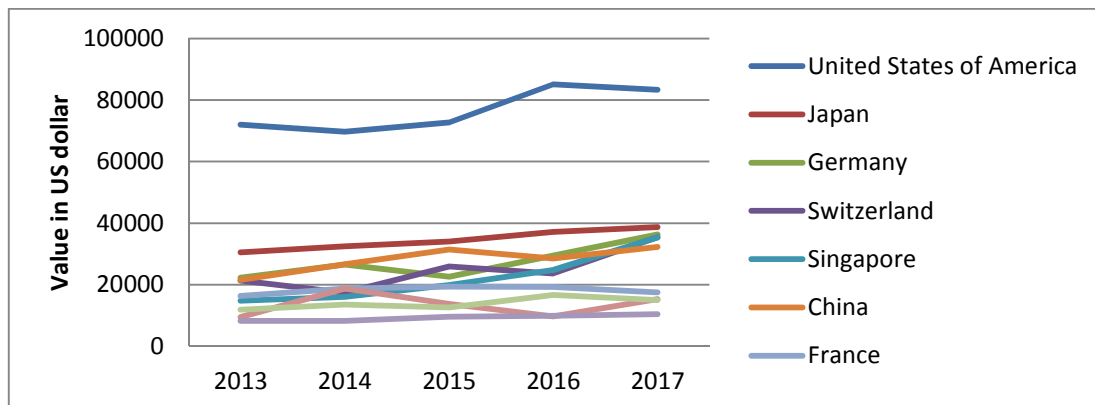
**Impact Ratings: H = High, M = Medium, L = Low**

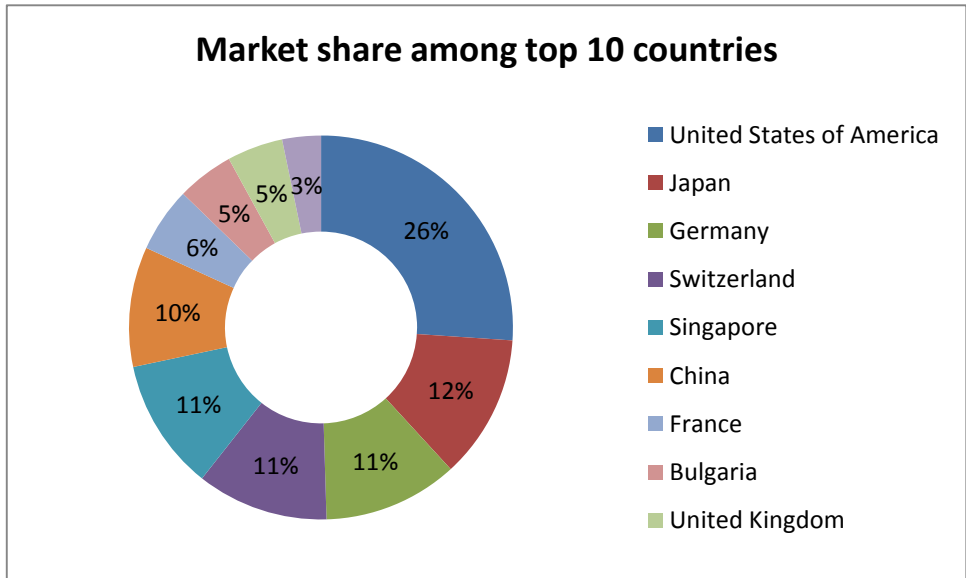
➤ **Industry segment – Online Analyzers :**



➤ **Top 10 Exporter countries to India for Online Analytical Instrument (HS Code : 902780)**

	2013	2014	2015	2016	2017
United States of America	72007	69665	72727	85058	83300
Japan	30488	32512	34013	37135	38699
Germany	22270	26554	22561	29480	36277
Switzerland	21303	17377	25944	23611	35386
Singapore	14827	16000	19898	24738	35382
China	21587	26614	31396	28477	32207
France	16292	18715	19379	19273	17511
Bulgaria	9531	18691	13727	9659	15279
United Kingdom	11839	13529	12621	16687	14998
Ireland	8283	8249	9563	9889	10385

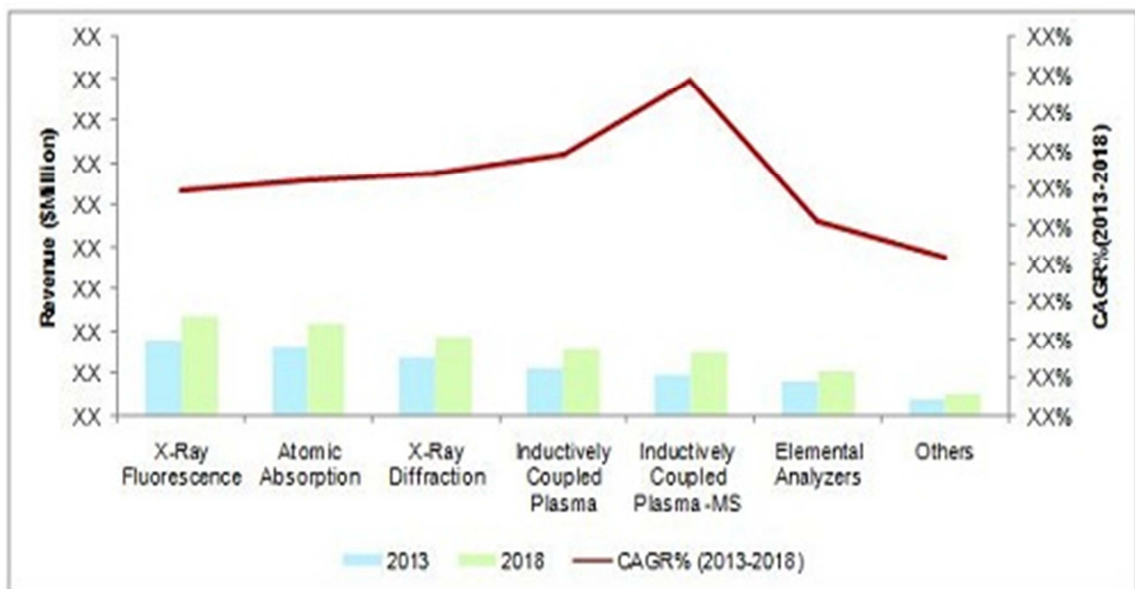




Year 2017

Source : Trade map

➤ **Trend of Global Atomic Spectroscopy Market, by Technology, 2013 – 2018 :**



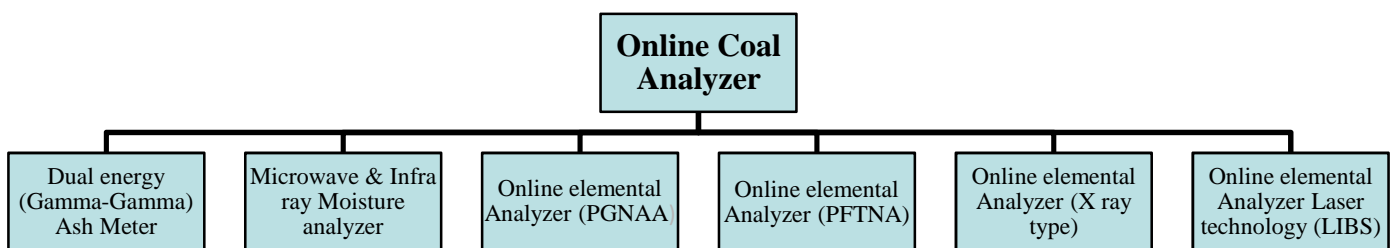
The global atomic spectroscopy market was valued at an estimated \$4.02 billion in 2013 and is expected to grow at a CAGR of 6.4% from 2013 to 2018. The market is dominated by North America, followed by Europe, Asia, and the Rest of the World (RoW). North America is expected to maintain its leadership position in the market in the coming years, followed by Europe. The North American market growth is likely to be driven by factors such as the increasing number of atomic spectroscopy conferences, symposia, and seminars, coupled with a favorable funding scenario in this region. However, the Asian market is slated to grow at the highest CAGR in the forecast period. The major players in this market include Thermo Fisher Scientific (U.S.), Agilent Technologies (U.S), PerkinElmer, Inc. (U.S.), Bruker Corporation (U.S.), and Rigaku Corporation (Japan), among others.

## ➤ Online Coal Analyzers – Segment :

The Online Coal Ash Analyzer is used for on-line detection, measurement and control of coal ash. It is widely applied in coal mines, coal washing plants, coal blending plants, coking plants, coal-fired power plants, steel plants and coal terminal, etc.

This report focuses on the Online Coal Ash Analyzers in India market, to split the market based on manufacturers, states, type and application.

## ➤ Types of Online Coal analyzers :



### • Dual energy (Gamma-Gamma) Ash Meter :



It adopts the most rational dual energy Gamma ray (DUET) transmission technology which measures the absorption of gamma rays by ash in coal. Two nos radioactive sources are used, e.g; Cs<sup>137</sup> and Am<sup>241</sup>

This instrument along with moisture meter is used for determining coal ash content and gross calorific value of coal online during conveying.

- **Microwave & Infra ray Moisture analyzer :**



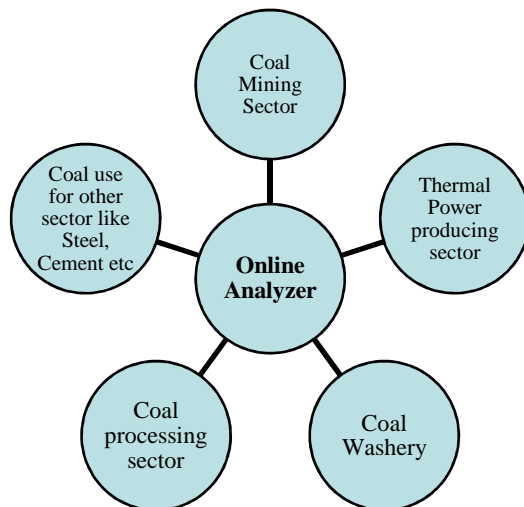
Moisture Analyzer is applicable to detect the water content of bulk materials on the belt conveyor in an inline and continuous manner, transmit accurate analog signals for the site and be involved in automatic moisture control. This is built on the technology of Microwave/Infra ray.

- **Online elemental analyzer :**



It permits a real-time elemental analysis of the material streams on the conveyor belt in a non-contact mode. Sulfur, ash, moisture and calorific value readings are updated every minute. It plays a significant role in the mining, washing, batching, and fired coal mixing process. This elemental analyzer can be based on various technologies like On line Neutron Activation (PGNAA), Neutron activation through electrical energy (PFTNA), X-ray technology (XRF), Laser technology (LIBS). This is most accurate realtime analyzer being adopted by Coal Industries Globally.

➤ **Application areas of Online Coal Analyzer in India :**





➤ **Business Prospects in India :**

• **Thermal Power Producing sector ;**

- Existing thermal power plant to identify/monitor coal quality real time basis and according payment to be made to the supplier.
- To meet government guideline towards pollution control, analysis of coal etc.(Ref. MOeFC circular, CEC guideline for using online analysis etc). Ministry of Environment, Forest & Climate Change (MoEF & CC) has issued the Protocol for sampling, analysis of coal on use & supply of raw or, blended or, beneficiated coal with ash content not exceeding 34% in coal based thermal power plant.
- Thermal power plant are using this equipment for realtime coal property monitoring purpose in place of manual sampling technology to obtain coal quality from lab.

- **Steel Plant:** To monitor supply as per spec, blending from multiple sources to maintain spec, plant efficiency, utilise rejects/recycling of resources, maintain emission norms, washery process control, to reduce time delay for sampling and manual error in analysis etc.

- **Mining :** To reduce out-of-spec deliveries, improve consistency across a shipment, Coal quality assurance and utilize coal from multiple sources with widely varying qualities.

- **Coal processing sector:** To monitor supply as per spec, blending from multiple sources to maintain spec, plant efficiency, utilise rejects/recycling of resources, maintain emission norms, to reduce time delay for sampling and manual error in analysis etc.

- **Washery :** To monitor & maintain washery process control.

- **Other bulk material sector :** Steel, Cement etc sector are using good quality coking coal which are required to be monitored on realtime basis. The use of coal online analyzer in this sector is huge.

➤ **Coal Processing Industry in India :**

- India's coal based power capacity has grown at a CAGR of 6.4% from 65 GW in 2003 to 107 GW by end of 2011 out of total power capacity of 220 GW .
- 2,200 coal base power projects that are currently at various stages of development (i.e. under construction, planned, proposed etc.), totalling over 880GW of capacity by Yr. 2020.

- As per Govt. declared policy, Power plants to be run with washery rejects. There by requirement of substantial nos of washeries to be installed.
- On FY2009-10, CIL has declared construction of 12 nos new washeries which are under various stage of development.
- Distribution of coal blocks (approx 100 nos) to Pvt. Organisation which are mostly owner of thermal power plant. All these block owners has to utilise the coal after washing. So, there is also a possibility for substantial washeries in Pvt. Sector.
- Few companies from Australia, Norway has started activities in the field of mine development and installation of washeries apart from existing Indian companies like McNally Bharat, MAMC etc.
- **PSU Coal Washeries under operation.**
- **Private Sector Coal Washeries under operation.**
- **Private sector Coal Washeries under construction.**

**Proposed Coal washeries under Coal India Ltd. :**

Sl. No	Client	Location	Material	Capacity (MTPA)
1	ECL	Chitra	Non-coking	2.5
2	ECL	Sonpurbazari	Non-coking	8.0
3	BCCL	Madhuband	Coking	5.0
4	BCCL	Patherdih	Coking	5.0
5	BCCL	Patherdih	Coking	2.5
6	BCCL	Bhojudih	Non-coking	2.0
7	BCCL	Dugda	Coking	2.5
8	BCCL	Dahibari	Non-coking	1.6
9	CCL	Ashoka	Non-coking	10.0
10	CCL	New Piparwar	Non-coking	3.5
11	CCL	Karo	Non-coking	2.5
12	CCL	Konar	Non-coking	3.5
13	CCL	Dhori	Coking	2.5
14	SECL	Kusmunda	Non-coking	10.0
15	SECL	Baroud	Non-coking	5.0

16	MCL	Basundhara	Non-coking	10.0
17	MCL	Jagannath	Non-coking	10.0
18	MCL	Hingula	Non-coking	10.0
19	MCL	IB Valley	Non-coking	10.0
20	MCL	Kolarpimpri	Non-coking	5.0

**PSU (other than CIL) Coal Washeries under operation:**

Sl. No	Client	Location	Scope of work	Material	Capacity
1	NCDC (Now CCL)	Sawang Jharkhand	H.M.cyclone washery	Coking Coal	2.0 mtpa
2	NCDC (Now CCL)	Kargali Jharkhand	First modification- Baum jig and H.M.cyclone washery	Coking Coal	2.4 mtpa
3	CCL	Kargali Jharkhand	Second modification –Deduster & Batac Jig washery	Coking Coal	3.0 mtpa
4	CCL	Kargali Jharkhand	Close circuit slurry treatment Plant	Coal Slurry	0.25 mtpa
5	CCL	Sawang Jharkhand	Deshaling Plant with Batac Jig	Coking Coal	1.20 mtpa
6	CMPDIL	Patherdih Jharkhand	Pilot Beneficiation Plant with Batac Jig	Coking Coal	5.0 tph
7	CCL	Rajrappa Jharkhand	Batac Jig washery and H.M. cyclone circuit for middling re washing.	Coking Coal	3.0 mtpa
8	CCL	Kedla Jharkhand	Batac Jig washery for fine coal and H.M. cyclone circuit for middlin re-washing..	Coking Coal	2.5 mtpa
9	BCCL	Bhjudih W.B	Batac Jig washery for fine coal and dove tailing with H.M. bat washery for coarse coal	Coking Coal	1.2 mtpa
10	CCL	Sawang Jharkhand	Over size restriction plant for deshaling unit	Coking Coal	1.4 mtpa

Sl. No.	Client	Location	Scope of work	Material	Capacity
11	NCL	Bina U.P.	Deshaling plant for power grade coal with Rom Jig	Non Coking Coal	4.5 mtpa
12	BCCL	Bhojudih W.B	Deshaling with electronically Controlled Baum Jig	Coking Coal	2.0 mtpa
13	CMPDIL	Kathara Jharkhand	Froth flotation and screen bowl centrifuges plant.	Coal Slurry	0.25 mtpa
14	BCCL	Madhuband Jharkhand	Batac Jig washery and H.M. cyclone circuit for middling re- washing.	Coking Coal	3.0 mtpa
15	CCL	Kargali Jharkhand	Deshaling plant with Rom Jig	Coking /Non Coking Coal	1.62 mtpa
16	CCL	Piparwar Jharkhand	Batac Jig deshaling plant for power grade coal	Non Coking Coal	6.5 mtpa
17	IISCO	Chasnalla Jharkhand	Batac Jig washery for fine coal and dove tailing with H.M. bath washer for coarse coal	Coking Coal	2.15 mtpa
18	DSP	Dugapur W.B	Batac Jig washery with spirals	Coking Coal	1.6 mtpa
19	BCCL	Bhojudih W.B	Froth flotation plant	Coking Coal	0.4 mtpa
20	CMPDIL	Rajrappa Washery	Froth flotation tailings treatment Plant	Coking Coal	0.25 mtpa

**Private Sector Coal Washeries under operation:**

Sl. No	Client	Location	Scope of work	Material	Capacity
1	Bhatia International	Ghugus, Maharashtra	Coal Washing Plant for Power Plant	Non-Coking Coal	2.5 mtpa
2	Bhushan Power & Steel Ltd.	Rengali, Orissa	Coal Washing Plant for Sponge Iron Application with Jigging Process	Non-Coking Coal	2.5 mtpa
3	Bhushan Steel Limited	Meramandali, Orissa	Coal Washing Plant for Sponge Iron Application with Heavy Media Process	Non-Coking Coal	2.0 mtpa
4	Bhushan Steel Limited	Meramandali, Orissa	Coal Crushing & Screening Plant	Non-Coking Coal	3.6 mtpa
5	Salasar Sponge & Power Limited	Raigarh, Chattisgarh	Coal Washing Plant with Jig	Non-Coking Coal	0.6 mtpa

Sl. No	Client	Location	Scope of work	Material	Capacity
6	McNally Bharat	Sarsatali, Orissa	Coal Washing Plant with Batac Jigging Process for CESC	Non-Coking Coal	1.5 mtpa
7	Gujarat NRE Coke Limited	Jam-Khambalia (Jamnagar)	Washing of fines (-)0.5mm @ 30 TPH with Pneumatic Flotation Machine	Coking Coal	0.18 mtpa

8	Aryan Coal Benefication Ltd	Chakabura, Chattisgarh	Coal Washing Plant with 200 TPH Batac Jigging Process	Non-Coking Coal	1.0 mtpa
9	Bhatia International Lt	IB Valley	250 TPH Heavy Media Bath Plant with other Equipment Feed size : (50-0) mm	Non-Coking Coal	1.5 mtpa
10	Gujarat NRE Coke Limited	Bahchau	150 TPH Coal Washing Plant with H.M.Process and Washing of fines (<math>0.5\text{mm}</math> @ 30 TPH with 2 stage Pneumatic Flotation Unit	Coking Coal	0.75 mtpa 0.18 mtpa

Sl. No.	Client	Location	Scope of work	Material	Capacity
11	Global Coal & Mining Pvt Ltd	Manuguru, A.P.	Coal Washing Plant with 300 TPH Batac Jigging Process	Non-Coking Coal	1.5 mtpa
12	JSPL	Raigarh M.P	Batac Jig coal washery for sponge iron plant	Non Coking Coal	1.0 mtpa
13	Grasim Cement Limited	Rawan	Modification of Coal Washing Plant with H.M.Process	Non-Coking Coal	0.65 mtpa
14	Grasim Cement Limited	Rawan	Coal Washing Plant with H.M.Process	Non-Coking Coal	0.65 mtpa
15	Gujarat NRE Coke Limited	Jam-Khambalia (Jamnagar)	150 TPH Coal Washing Plant with H.M.Process	Coking Coal	0.75 mtpa

**Pvt Sector Washeries Under Construction:**

Sl. No.	Client	Location	Scope of work	Material	Capacity
1	Aryan Coal Benefica-tion Ltd	IB Valley	Coal Washing Plant with 200 TPH Bata Jigging Process	Non-Coking Coal	1.0 mtpa
2	S.V.Power Private Limited	Korba, Chattisgarh	Erection & commissioning of Coal Washing Plant with Jigging Process	Non-Coking Coal	2.5 mtpa
3	Shree Shyam Ispat Indi Pvt Ltd	Raigarh, Chattisgarh	Coal Washing Plant with Jig	Non-Coking Coal	50 tph
4	Aryan Coal Benefica-tion Ltd	Himgir, Orissa	Coal Washing Plant with 300 TPH Bata Jigging Process	Non-Coking Coal	1.5 mtpa
5	Aryan Coal Benefica-tion Ltd	IB Valley	Coal Washing Plant with 200 TPH Bata Jigging Process	Non-Coking Coal	1.0 mtpa

Sl. No.	Client	Location	Scope of work	Material	Capacity
6	S.V.Power Pvt Ltd	Korba, Chattisgarh	Erection & commissioning of Coal Washing Plant with Jigging Process	Non-Coking Coal	2.5 mtpa
7	Shree Shyam India	Raigarh, Chattisgarh	Coal Washing Plant with Jig	Non-Coking Coal	50 tph
8	Ultra Tech Cement Limited	Hirmi Cement Raipur, Chattisgarh	400 TPH II stage Coal Washing Plant with Cyclone/Cyclone Process	Coking Coal	2.0 mtpa
9	S.V.Power Pvt Ltd	Korba, Chattisgarh	Coal Washing Plant with Jigging Process	Non-Coking Coal	2.5 mtpa
10	Bhushan Steel Ltd	Meraman-dali, Orissa	Coal Washing Plant with Batac Jig Process	Non-Coking Coal	3.6 mtpa
11	Ultra Tech Cement Limited	Awarpur Cement Chandrapur, Maharastra	300 TPH II stage Coal Washing Plant with Jig/cyclone Process	Coking Coal	1.5 mtpa



Sl. No.	Client	Location	Scope of work	Material	Capacity
12	ACC	Kymore	200 TPH Coal Washing Plant with Heavy Media Cyclone Process	Non-Coking Coal	1.0 mtpa
13	Global Coal & Mining Pvt Ltd	Belpahar, Orissa	Coal Washing Plant with 300 TPH Batac Jigging Process	Non-Coking Coal	1.5 mtpa
14	Bhushan Power & Steel Limited	Rengali, Orissa	Coal Crushing & Screening Plant and Coal Washing Plant for Spong Iron Application with Heavy Media Process	Non-Coking Coal	4.8 mtpa & 3.6 mtpa
15	ACC	Chaibasa	100 TPH Coal Washing Plant with Heavy Media Cyclone Process	Non-Coking Coal	0.5 mtpa
16	ACC	Jamul	100 TPH Coal Washing Plant with Heavy Media Cyclone Process	Non-Coking Coal	0.5 mtpa
17	ACC	Bargarh	100 TPH Coal Washing Plant with Heavy Media Bath Process	Non-Coking Coal	0.5 mtpa

➤ **Major Companies in India dealing with Online Coal Analyzers :**

**1) Thermo Fisher scientific , US:**

Collaboration with Qualigens Fine Chemicals, India on Oct. 1, 2007 and formed a part of the Research Market Division (RMD), representing the **Fisher Scientific** brand in India.

**2) SODERN, France/PANalytical, Netherlands:**

Established **Sodern, Neutron Instrumentation –India** by collaborating with MAHBROS Intertrade Pvt. LTD, Mumbai.

**3) SCANTECH, Australia:** Initiated marketing through Indian agent M/s Intra Project Consultants, Kolkata.

**4) Real time instruments , Australia:** Initiated marketing through Indian agent M/s Vishwa Industrial Co. Ltd. , Kolkata.

**5) Berthold Technologies, GmbH & Co KG, Germany:**

Established BERTHOLD TECHNOLOGIES (India) PVT LTD. Etc.

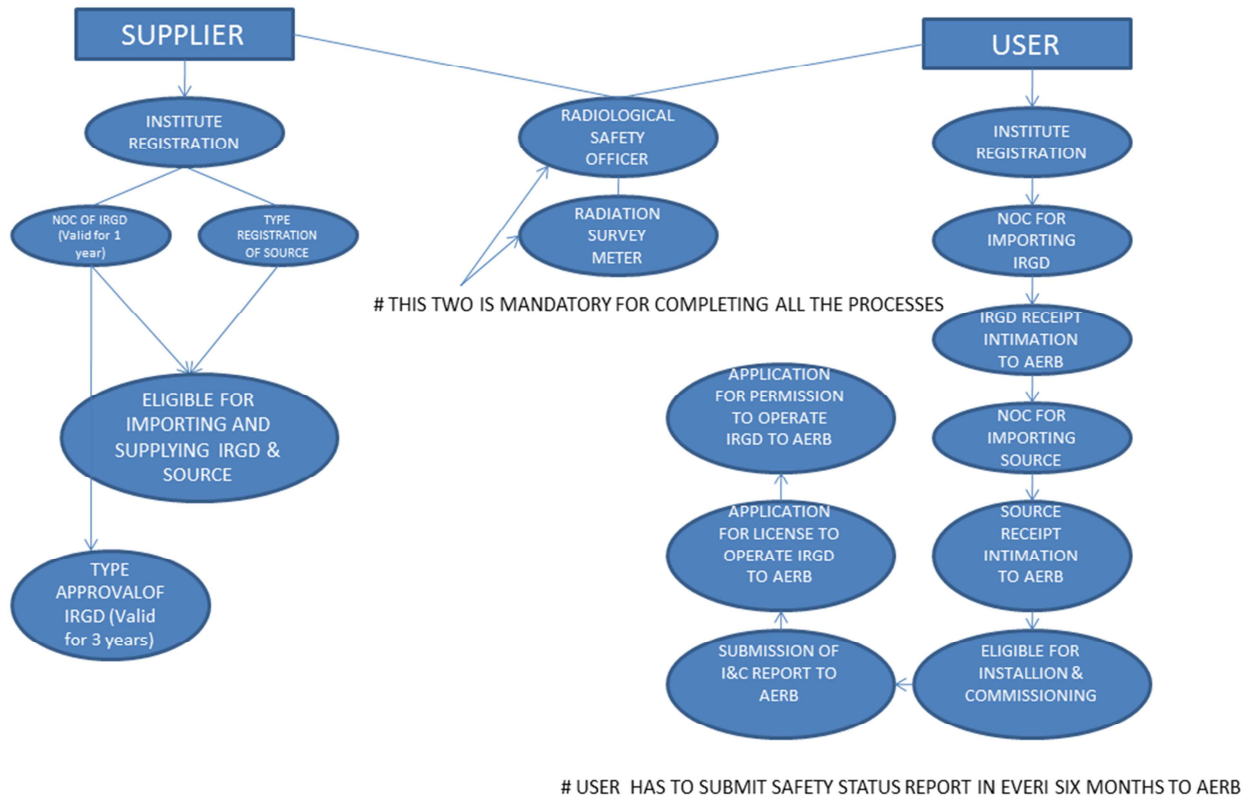
**6) DFMC (China) :**

Marketing through Indian agent M/s Eastman Crusher Co. Pvt Ltd. , Kolkata.

## ➤ Import procedures for Online Coal Analyzer :

Govt of India has restricted this item for import due to use of radioactive source. However, proper document and licence to be done from the concerned Authority in India e.g; Atomic Energy Regulatory Body. The manufacturer's product, importer and user/buyer all have to take permission from AERB before import in India. This is a non-tariff barrier imposed by the Government to regulate import of radioactive sources.

Following step wise procedures are furnished to obtain license to import these items :



- **To obtain type certificate/import NOC for Authorised representative of Manufacturer:**

1. Global manufacturer/OEM has to authorize an Indian entity/dealer/agent for import and service activities for their equipment.
2. Indian entity shall comply all the criterias as per AERB, e.g; RSO certification of their manpower, procurement of radioactive survey meter, radioactive protection dress etc to get eligibility to apply for institute registration with AERB.
3. Indian entity shall apply to AERB for institute registration.
4. After obtaining institute registration, they shall apply for NOC for specified model of eqpt.
5. After getting NOC (for 1 year), import of initial one no equipment to be done.
6. Intimation to be raised to AERB for receipt of equipment.
7. NOC for radioactive source to be applied after the above.
8. After import, intimation to be given to AERB for receipt of source.

9. Eligibility for Supply and installation at customer plant to be completed.
10. After successful installation for 1 no equipment, type approval with validity of three years to be given to the concerned Indian company.

**Sample No Objection Certificate for Authorisation to import this item:**

	GOVERNMENT OF INDIA ATOMIC ENERGY REGULATORY BOARD RADIOLOGICAL SAFETY DIVISION
भारत सरकार परमाणु ऊर्जा नियामक परिषद् विकिरण सुरक्षा प्रभाग	ॐ
<b>Case File Number:</b> WB-34743-NG-SU-NGD-E-001	<b>Issuance Date:</b> 14/08/2017
<b>Document Number:</b> 17-COMSUPPNOC-207986	<b>Expiry Date:</b> 14/08/2018
<b>NO OBJECTION CERTIFICATE FOR IRGD UNIT/MODEL DF-5703(A) MANUFACTURED BY DANDONG DONGFANG MEASUREMENT AND CONTROL TECHNOLOGY CO., LTD., CHINA FOR OBTAINING TYPE APPROVAL</b>	
This has reference to your application no. 17-257572 dated 08/08/2017 .	
<ol style="list-style-type: none"> <li>1. M/s. EASTMAN CRUSHER COMPANY PRIVATE LIMITED., Kolkata is hereby informed that the Atomic Energy Regulatory Board (AERB) has no objection for import and supply of unit/model as detailed in Annexure-I.</li> <li>2. EASTMAN CRUSHER COMPANY PRIVATE LIMITED., Kolkata shall ensure prior to the supply of the said unit that the user has valid authorisation from Radiological Safety Division, AERB, Mumbai to procure the unit and the source.</li> <li>3. The unit/model shall be installed only at premises authorised by Radiological Safety Division, AERB, Mumbai.</li> <li>4. EASTMAN CRUSHER COMPANY PRIVATE LIMITED., Kolkata shall be responsible for import, sale, installation, commissioning, servicing and maintenance, supply of spares, source replacement, decommissioning/dismantling of the unit/model and disposal of the radioactive source.</li> <li>5. EASTMAN CRUSHER COMPANY PRIVATE LIMITED., Kolkata shall keep AERB informed about the import, sale, installation, commissioning, servicing and maintenance status of the unit/model.</li> <li>6. EASTMAN CRUSHER COMPANY PRIVATE LIMITED., Kolkata shall demonstrate to the representatives of Radiological Safety Division, AERB, Mumbai, that the safety features are provided as per the technical documents submitted to AERB and in adequate measure for obtaining Type Approval.</li> </ol>	
<b>Issuing Authority</b>  Dr. A.U.Sonawane Head	
MR. SALIL KUMAR DUTTA EASTMAN CRUSHER COMPANY PRIVATE LIMITED. 4A, COUNCIL HOUSE STREET., KOLKATA-700001, WEST BENGAL	
 परमाणु ऊर्जा नियामक परिषद्, निर्यातक भवन, अणुशांतिनगर, मुंबई 400094 (महाराष्ट्र) Atomic Energy Regulatory Board, Niyamak Bhavan, Anushaktinagar, Mumbai 400094 (Maharashtra)	 No. 60100 6001 2008 Organisation
वेबसाइट/Website: www.aerb.gov.in	दूरभाष/Tel: 91-22-2599 0656
फोन/Fax: 91-22-2599 0650	

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<b>ANNEXURE-I</b>	
<b>Details</b>	
<b>Type of Equipment</b>	IRGD
<b>Model</b>	DF-5703(A)
<b>Radioisotope Name</b>	<b>Maximum Design Activity</b>
Cf-252	803.02 MBq
<b>Original Equipment Manufacturer</b>	Dandong Dongfang Measurement and Control Technology Co., Ltd., China
<b>Original Equipment Supplier</b>	Dandong Dongfang Measurement and Control Technology Co., Ltd., China
<b>Issuing Authority</b>  Dr. A.U.Sonawane Head	

- **To obtain import NOC for user/importer/purchaser:**

1. Institute Registration with AERB for User/Importer – to be filed by NTPC with relevant company documents. **Scope – End user/Customer**
2. Nomination of Engineer (at least 2 engineers) for Radioactive Safety Officer (RSO) training course & submission of Application for RSO training course. **Scope – End User/Customer**
3. Procurement of monitoring tool/RSM by user (basic infrastructural requirement for NG facility). **Scope- End user/Customer**
4. RP & RSO Registration of user’s engineers after completion of RSO training. **Scope- End user/Customer**
5. Addition of monitoring tool/RSM equipment procured by user’s plant at AERB portal for completion of basic infrastructural requirement for NG facility. **Scope- End user/Customer**
6. Application for import of Equipment for user’s Plant, separate application to be submitted for each equipment. **Scope- End user/Customer**
7. Import /Supply of Equipment for user’s Plant after obtaining respective NOC. **Scope- Supplier.**
8. Receipt intimation for each equipment at AERB portal for further application for import of sources. **Scope- End user/Customer**
9. Application for import of Sources for each equipment, separate application to be submitted for each equipment. **Scope- End user/Customer**
10. Import of sources for each equipment after obtaining import permission from AERB. **Scope- Supplier.**
11. Supply of sources to user’s plant. **Scope- Supplier.**

The screenshot displays the 'Employer Details' form on the AERB ELORA portal. The form is divided into four main sections: Personal Details, Residential Address, Permanent Address, and Contact Details. Each section contains several input fields, many of which are dropdown menus. Mandatory fields are indicated by an asterisk (\*). A note at the top right of the form states 'All fields marked by \* are mandatory'. At the bottom of the form, there are 'Submit', 'Close', and 'Reset' buttons. The browser's address bar shows the URL 'https://elora.aerb.gov.in/ELORA/registerInstituteAction.htm'.

➤ **Conclusion :**

Online Coal Analyzer market in India is rapidly growing due to massive change in Government policy towards beneficiation of coal, aggressive monitoring of coal quality, environmental issues to reduce carbon/sulphur etc material emission, reduce dependency on imported coal, transparency on coal linkage/supplier-user agreement disputes etc. As per Govt direction, thermal power plant in India has to initiate for installation of online analyzer to monitor coal ash within 34% realtime basis. To meet this demand, advance technology on realtime analysis of coal is very much required which ha increased a substantial market for Online Analyser in India.

But due to use of radioactive sources, these equipment has to pass through various stages of import barriers as per Indian regulation. This total report has been prepared for giving an outline to import of this equipment in India, it's business prospects and global market environment for this equipment.