

SALT



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(Part- III : Mineral Reviews)



55th Edition

SALT

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**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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Salt is the most significant of all the industrial minerals. Occurrence of rock salt in India is scanty. The only producer, Hindustan Salt Ltd, Jaipur has its mines located in district Mandi, Himachal Pradesh. The main source of common salt is sea water (about 82%). It is also obtained from subsoil brines, by solar evaporation.

Common salt, when pure, is mineral halite which is an essential item for human consumption. Halite is colourless or white and may contain various tints.

"Salt is a Central Subject in the Constitution of India and appears as Item No. 58 in the Union List of the 7th Schedule, which reads:

- (a) "Manufacture, Supply and Distribution of salt by Union Agencies; and
- (b) "Regulation and control of manufacture, supply and distribution of salt by other agencies".

The Central Government is responsible for controlling and regulating all aspects of the Salt Industry. The Salt Commissioner's Organisation (SCO), Jaipur, Rajasthan, an attached office under the Ministry of Commerce & Industry (Department of Industrial Policy & Promotion), Government of India, is the Authority entrusted with the above task. The SCO is responsible for monitoring the production, distribution, quality, prices, supply and administration of Salt Cess Act, 1953 and the Rules made thereunder.

RESERVES/RESOURCES

As per NMI database, based on UNFC system, the total reserves/resources of rock salt as on 1.4.2015 have been estimated at 16.03 million tonnes in Mandi, Himachal Pradesh. The entire resources fall under remaining resources category.

PRODUCTION AND STOCKS

There was no production of salt (rock) in 2015-16 as well as in 2014-15 due to temporary discontinuance of mining operations. There was no mine-head stock of salt at the end of year 2015-16. India is the 3rd largest salt (common) producing country in the world after China & USA with a production of about 276 lakh tonnes during the year 2015-16 which is about 3% more than previous year's production.

Production of salt involves extensive use of renewable sources of energy. Weather conditions play an important role in production of salt.

Salt (common) is manufactured mainly by solar evaporation of sea water in the peninsula States that have vast coastal regions. Gujarat was the leading State followed by Tamil Nadu, Rajasthan, Andhra Pradesh, Maharashtra, West Bengal, Karnataka, Odisha and Goa. Private Sector contributed significantly in the production of salt and accounted for 92.8% of the production. Public/Joint Sector contributed 1.3% and the rest 5.8% was from the Co-operative Sector during 2015-16.

The major by-products recovered in the Salt Industry are gypsum, bromine, magnesium chloride, magnesium sulphate, ammonium bicarbonate and soda bicarbonate. The average number of labourers employed in the Salt Industry during 2014-15 and 2015-16 were 104,060 and 111,158 respectively.

MINING

Due to temporary discontinuance of mining activity from 2011-12 no remarkable development in mining of salt (rock) was noticed. Hindustan Salts Ltd and its subsidiary Sambhar Salts Ltd have their own mines at Mandi in Himachal Pradesh.

USES

Salt, in addition to its culinary and domestic uses, is also employed in meat packing, fish curing & its preservation, dairying, preservation & processing of hides, manufacturing of soaps, detergent & dyestuff, dyeing & finishing of fabrics, refrigeration, glazing earthenware, explosives, leather industries, bakery products, for soil stabilisation, in manufacturing artificial rubber and as a wood preservative. In agriculture, salt is used for treating hay and as a fertilizer for certain crops. In countries with cold weather conditions, salt is used in controlling ice and snow on streets and highways.

Industrial Applications

Salt is an important raw material used in Chemical Industry. It is used in the production of basic chemicals like sodium carbonate (soda ash), caustic soda, hydrochloric acid, chlorine, bleaching powders, chlorates, sodium sulphate (salt cake) and sodium metal. These basic chemicals, in turn, are used in the preparation of various end-products, such as, soaps, detergents, chlorinated hydrocarbons and carbon tetrachloride. Other important applications where salt is widely used are in food processing; as freezing-point depressant in refineries & milk supply schemes; treatment of industrial wastes; purification of drinking water and manufacture of synthetic indigo, explosives, papers, etc.

The rock salt produced from Mandi mines contains 67.81% NaCl which is not suitable for human consumption as the content of sodium chloride is low from the required 96% NaCl necessary for human consumption. However, this salt finds application as essential supplement in cattle feeds.

Iodised Salt

The SCO is the nodal agency for monitoring the production and quality of iodised salt at the production level and ensuring its equitable distribution in the country. Production of iodised salt continued its progressive trend and the Universal Salt Iodisation (USI), a programme under National Iodine Deficiency Disorder Control Programme (NIDDCP) reached new heights. The

production of iodised salt (Refined) was 44.64 lakh tonnes during the year 2015-16.

A portion of rock salt produced is iodised in order to meet the requirements of goitre-endemic areas in the country. Iodised salt is produced by mixing potassium iodate with salt using spray, drip feed, dry mixing and submersion processes. Iodisation of salt is carried out in plants operated by Sambhar Salts Ltd (a subsidiary of Hindustan Salts Ltd), Kharagoda, Gujarat. About 578 plants including 128 refineries with an annual capacity of 22.41 million tpy produce over 6.47 million tonnes of iodised salt. The Bureau of Indian Standards (BIS) has revised the Specifications of Iodised Salt and formulated new Specifications for refined Iodised Salt and Vacuum Evaporated Iodised Salt under IS 7224:2006. BIS has prescribed IS 797:1982 (Reaffirmed 2012) as specification of common salt for chemical industries.

Potassium Iodate Manufacture

Potassium iodate used for fortifying salt with iodine is produced indigenously, however, iodine, the basic raw material for its production is imported. There are about 13 potassium iodate manufacturing units, registered with the Salt Department.

Statewise production of salt (common) during the year 2015-16 is furnished in Table-1.

Table – 1 : Statewise Production of Salt (Common), 2015-16 (By States)

States	2015-16
India	27643
Andhra Pradesh	393
Goa	2
Gujarat	22707
Karnataka	13
Maharashtra	139
Odisha	11
Rajasthan	2384
Tamil Nadu	1982
West Bengal	12

Source: Salt Commissioner, Govt. of India, Jaipur, September, 2016

CONSUMPTION

Industrial consumption of salt (common) increased marginally to 12 million tonnes during 2015-16 from 11.5 million tonnes in 2014-15. During the year 2015-16, human consumption of salt was reported at 6.2 million tonnes. The industrial consumption of salt is reflected in Table -2.

Table – 2 : Industrial Consumption of Salt 2014-15 and 2015-16 (By Industries)

Industry	(Quantity in '000 tonnes)	
	2014-15	2015-16
Total	11493	11904
Caustic soda & soda ash	8927	9457
Other Industries (Paper/Dye, foods, steel, oil, chemical etc.)	2566	2447

Figures rounded off.

Source: Salt Commissioner, Govt. of India, Jaipur.

TRADE POLICY

Exports of salt have been brought under Open General Licence (OGL) with effect from 25th

August, 1987 vide Ministry of Commerce, New Delhi, Export Trade Control Public Notice No. 26-ETC(PN)/87 dated 25th August, 1987. The Ministry of Commerce, Government of India, vide Notification No. 482(E) dated 25th July, 1991 has exempted certain categories of export from compulsory pre-shipment inspection.

As per Foreign Trade Policy (FTP) 2015-2020, exports and imports of Rock Salt and Common Salt (including Iodised Salt) under heading no. 2501 are allowed as 'Free'.

FOREIGN TRADE

Exports

Exports of salt (other than common salt) increased to 5.93 million tonnes in 2015-16 from 4.78 million tonnes during the preceding year. Exports were mainly to China (38%), Korea, Rep. of (19%), Qatar (13%) and Japan (8%) in terms of quantity (Table - 3).

Imports

In 2015-16, imports of salts (other than common salt) were at 55,642 tonnes as compared to 41,300 tonnes in the previous year. Imports were mainly from Pakistan (99%) under Open General Licence (OGL) (Table - 4).

Table – 3: Exports of Salt (other than common salt) (By Countries)

Country	2014-15		2015-16 (P)	
	Qty (t)	Value (` '000)	Qty (t)	Value (` '000)
All Countries	4776491	6390687	5926639	6701178
China	1931349	2127197	2263881	1981542
Qatar	546594	801965	764293	1153928
Korea, Rep. of	506150	609354	1123806	1097156
Japan	657718	1056083	489516	776064
Indonesia	197361	292652	337725	512142
Vietnam	262799	405476	344882	356592
Bangladesh	212335	259558	276323	265035
USA	49751	105937	100850	164036
Thailand	56005	63580	96007	104879
Nepal	30365	108941	19046	66159
Other countries	326064	559944	110310	223645

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**Table – 4: Imports of Salt (other than common salt)
(By Countries)**

Country	2014-15		2015-16 (P)	
	Qty (t)	Value (` '000)	Qty (t)	Value (` '000)
All Countries	41300	113604	55642	173742
Pakistan	40873	94600	55255	156239
USA	37	5366	61	6512
Germany	121	2735	227	5812
South Africa	-	-	1	1318
China	102	2589	24	1129
Israel	28	1468	15	853
Italy	5	180	21	519
UK	5	273	1	362
Serbia	-	-	20	218
Belgium	1	248	1	136
Other countries	128	6145	16	644