

REPORT

1966-67

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GOVERNMENT OF INDIA
MINISTRY OF STEEL, MINES & METALS
(DEPARTMENT OF IRON & STEEL)
NEW DELHI

CORRIGENDA

(1) Under 'Contents':-

- (i) Against '24. Future Development' Read '35-36' under the column 'Pages'.
 - (ii) Against '25. Appendix I' Read '37' under the column 'Pages'.
 - (iii) At the end ADD '26. Appendix II' and against it '38' under the column 'Pages'.
- (2) At the top of Organizational Chart appended at the end of the Report INSERT 'Appendix II'.
- (3) At the bottom of the Organizational Chart INSERT '38' as Page Number.
- (4) At page 10 in the last column of the ~~Table~~ given under 'Imports' FOR '(In tonnes)' Read '(In crores)'.

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CONTENTS

	PAGES
1. Introduction & Organization	1-2
2. Production	2-5
3. Availability and Distribution of Steel	6
4. Prices	9
5. Imports and Exports	10-12
6. Hindustan Steel Limited	12
7. Rourkela Steel Plant	13-15
8. Bhilai Steel Plant	15-17
9. Durgapur Steel Plant	18-19
10. Bolani Ores Limited	20
11. Alloy Steel Project	20-21
12. Central Transport & Shipping Corp.	21
13. Central Engineering & Design Bureau	22
14. Sales (General)	22-23
15. Training & Manpower	23-24
16. Incentive Bonus	24
17. Industrial Relations	24-25
18. Financial Results	25-26
19. Coal Washeries	26-27
20. Bokaro Steel Plant	27-31
21. Hindustan Steelworks Construction Ltd.	31-32
22. Mysore Iron & Steel Limited	32
23. Steel Industry in Private Sector	33-35
24. Future Development	35
25. Appendix I	37

Organisation has been submitted on 21st March, 1967, and is under consideration of Government

In September, 1966, a committee headed by Shri A. K. Sarkar, former Chief Justice of India, was appointed to enquire into transactions with certain firms which were given large licences from 1951-52 onwards. This Committee was appointed pursuant to recommendation of the Public Accounts Committee.

PRODUCTION

Production of iron and steel during 1966 was as under:—

1. Production of Saleable Pig Iron

Producer	(In tonnes)	
	1965	1966*
Tisco	32,293	2,113
Iisco	217,922	203,163
Mysore	Nil	Nil
Rourkela	73,517	64,422
Bhilai	452,051	514,048
Durgapur	321,303	261,234
Ind. Dev. Corpn.	32,634	21,374
Acme	4,111	464
TOTAL	1,133,831	1,067,393

*Based on figures of actual production from January to November, and approximate figures for December, 1966.

2. Production of Electric Furnace Ingots

Main Producers	(In tonnes)	
	1965	1966
Tisco	17,224	16,961
Mysore	22,208	32,864
TOTAL (1)	39,432	49,825

(In tonnes)

Main Producers

	1965	1966
Others	2,852	2,444
Bharat Electric Steel Ltd.	15,918	13,234
National Iron & Steel Co. Limited	16,964	30,274
Guest Keen Williams Ltd.	6,860	5,410
Singh Engg. Works (P) Ltd.	6,932	6,526
Mukand Iron & Steel Works Limited	9,289	9,103
J. K. Iron & Steel Co. Ltd.	7,901	8,046
Hindustan Iron & Steel Co.	1,847	1,771
Steel Rolling Mills of Hindustan (P) Limited	..	3,339
Andhra Steel Corpn. Ltd.	68,563	80,147
TOTAL (ii)	1,07,995	1,29,972

GRAND TOTAL (i) & (ii)

3. Production of finished steel—Producerevise :

Producer	(In tonnes)	
	1965	1966
Tisco	1,108,578	1,072,111*
Iisco	618,883	579,203
Mysore	45,797	57,772
Rourkela	724,593	654,081
Bhilai	692,265	735,996
Durgapur	519,376	417,401
Secondary Producers	139,938	129,573
Regd. Re-Rollers	443,580	454,100
Wire Drawing Units	113,166	106,460
Un-Regd. Re-Rollers	122,542	137,400
TOTAL	4,528,718	4,344,097

*Only figures for December, 1966 are estimated

3(b). Production of Finished Steel—Categorywise :

(In tonnes)

Category	1965	1966 ^a
Ltd. & Med. Structurals	571,983	601,635
Heavy Structurals	203,086	193,870
Heavy Rails :		
(i) 1st Class	323,696	294,934
(ii) 2nd Class	108,404	99,619
Light Rails	15,762	6,706
Bl. Sheet (Corr.) . . . . .	..	23,247
Bl. Sheet (Plain) :		
(i) Hot Rolled	274,345	269,879
(ii) Cold Rolled	109,587	77,004
Galvd. Sheet (Plain)	25,954	12,658
Galvd. Sheet (Corr.)	98,789	36,572
Plates	380,245	367,483
Bars	1,267,522	1,326,749
Rods	324,311	272,287
Black Wire	58,215	52,600
Galvd. Iron Wire :		
(i) Telegraph	597	2,060
(ii) Others	31,082	35,300
High Carbon Wire	23,272	16,500
Hoops	11,934	9,000
Strips :		
(i) Hot Rolled	174,370	167,541
(ii) Cold Rolled	46,018	52,276
Sleepers	96,611	74,990
Tinplates	89,701	79,327
Skelp	198,322	201,814
Wheels, Tyres & Axles	58,208	49,046
Special Sections	36,704	21,000
TOTAL	4,528,718	4,344,097

^aOnly figures for December, 1966 are estimated

3(c). Production of Ingots during 1965*

(In tonnes)

Main Producers	Basic	Electric	Total
Tata Iron & Steel Co. Ltd.	1,931,886	17,224	1,969,110
Indian Iron & Steel Co. Ltd.	948,773	..	948,773
Mysore Iron & Steel Ltd.	42,159	22,208	64,367
Rourkela Steel Plant	1,000,582	..	1,000,582
Bhilai Steel Plant	1,260,200	..	1,260,200
Durgapur Steel Plant	1,017,083	..	1,017,083
TOTAL (i)	6,304,683	39,432	6,344,115
Others :			
Bhartia Electric Steel Co. Ltd.	..	2,852	2,852
National Iron & Steel Co. Limited	..	15,918	15,918
Guest Keen Williams Limited	..	16,964	16,964
Mukand Iron & Steel Works Limited	..	6,932	6,932
Singh Engg. Works (P) Limited.	..	6,860	6,860
J. K. Iron & Steel Co.	..	9,289	9,289
Hindustan Iron & Steel Co.	..	7,901	7,901
Steel Rolling Mills of Hindustan Limited.	..	1,847	1,847
Andhra Steel Corpn.	..	..	..
TOTAL (ii)	..	68,563	68,563
GRAND TOTAL (i) & (ii)	6,304,683	107,995	6,412,678

3(d). Production of Ingots during 1966*:

(In tonnes)

Main Producers	Basic	Electric	Total
Tata Iron & Steel Co. Ltd.	1,993,982	16,961	2,010,943
Indian Iron & Steel Co. Ltd.	924,466	..	924,466
Mysore Iron & Steel Ltd.	39,404	32,864	72,268
Rourkela Steel Plant	976,391	..	976,391
Bhilai Steel Plant	1,765,180	..	1,765,180
Durgapur Steel Plant	780,364	..	780,364
TOTAL (i)	6,479,787	49,825	6,529,612

*Only figures for December, 1966 are estimated.
3 M of S & M—2

(In tonnes)

Main Producers	Basic	Electric	Total
<i>Others:</i>			
Bhartia Electric Steel Co. Ltd.	..	2,444	2,444
National Iron & Steel Co. Ltd.	..	13,234	13,234
Guest Keen Williams Ltd.	..	30,274	30,274
Mukand Iron & Steel Works (P) Ltd.	..	6,526	6,526
Singh Engg. Works (P) Ltd.	..	5,410	5,410
J. K. Iron & Steel Co.	..	9,103	9,103
Hindustan Iron & Steel Co.	..	8,046	8,046
Steel Rolling Mills of Hindustan Limited.	..	1,771	1,771
Andhra Steel Corpn.	..	3,339	3,339
TOTAL (ii)	..	80,147	80,147
GRAND TOTAL (i) & (ii)	6,479,787	129,972	6,609,759

4. Import of Iron & Steel materials during 1965-66 and 1966-67 (Upto December, 1966):

(a) 1965-66	Quantity (In M/T)	Value (In '000 Rs.)
Bloom, Billets & Slabs	41,687	32,439
Structurals	13,452	10,863
Rails	488	633
Tinplate	34,034	35,189
Sheets	2,63,442	2,43,915
Plates	1,01,024	83,002
Bars & Rods	81,943	74,593
Wire	36,631	41,416
Wire Rods	22,740	19,680
Hoops & Strips	32,479	39,460
Pig Iron	76,369	21,120
Tool & Alloy Steel	1,29,459	2,14,932
Rly. Fittings	7,900	11,894
Castings & Forgings	19,735	52,950
Ferro Alloys	2,155	8,114
Blanks for Pipes & Tubes	362	1,012
Scraps Industrial	3,979	1,784
Scrap Re-Rollable	4,289	3,002
TOTAL	8,72,168	8,95,998

Category	Quantity (In M/T)	Value (In '000 Rs.)
(b) 1966-67 (Upto December, 1966):		
Blooms, Billets & Slabs	14,321	18,462
Structurals	11,384	11,409
Rails	622	441
Tinplates	25,795	31,186
Sheets	93,452	1,19,460
Plates	30,271	31,950
Wire Rods	5,305	6,330
Bars & Rods	29,627	34,379
Pig Iron	1,755	1,040
Hoops & Strips	11,517	18,041
Wires	11,646	18,365
Castings & Forgings	11,665	48,976
Scrap	6,837	5,556
Ferro-Alloys	1,598	6,397
Rlys. Fittings	5,934	11,343
Tool & Alloy Steel	58,236	1,48,501
TOTAL	3,19,949	5,11,836

5. Import of Iron & Steel materials against Barter Deals during 1965-66 & 1966-67 (Upto December, 1966)

(a) 1965-66:		
Category	Quantity (In M/T)	Value (In '000 Rs.)
Blooms, Billets & Slabs etc.	1,156	629
Tinplate Prime	1,532	1,445
Tinplate W/W	998	419
Tinmill Black Plates	3,622	2,841
Sheets	33,124	24,034
Plates	4,279	2,894
Sheet Piles	3,361	2,664
Scraps	21	4
Ferro Alloys	126	514
Hoops & Strips	3,764	2,541
Bars & Rods	65	49
Wire & Wire Rods	27,160	21,870
Tool & Alloy Steels	6,198	6,668
TOTAL	85,406	66,572

Category	Quantity (In M/T)	Value (In '000Rs.)
(b) For 1966-67 (Upto December 1966):		
Blooms Billets & Slabs etc.	332	186
Tinplate Prime	2,390	2,504
Tinplate W W	1,394	644
Sheets	3,064	2,411
Sheets Piles	5,205	4,412
Hoops & Strips	805	814
Bars & Rods	437	342
Wire Rods	9,783	7,915
Wires	842	871
Tool & Alloy Steel	402	470
Ferro-alloys	78	246
TOTAL	24,733	20,815

6. Export of Iron & Steel materials during 1965-66 & 1966-67 (Upto December, 1966):

(a) 1965-66:

Category	Quantity (In M/T)	Value (In '000Rs.)
Pig Iron etc.	37	20
Blooms, Billets, Slabs etc.	2,149	1,016
Finished Steel	1,39,886	57,231
Iron & Steel Scrap	4,46,429	54,994
Ferro Alloys	61,186	41,052
Castings & Forgings	950	583
TOTAL	6,50,637	1,54,896

(b) For 1966-67 (Upto December, 1966):

Pig Iron	64,729	16,253
Blooms, Billets and Slabs etc.	1,379	658
Finished Steel	1,65,428	91,541
Iron Steel Scrap	4,16,048	67,751
Ferro-Alloys	1,841	1,680
Castings & Forgings	117	104
TOTAL	6,49,552	1,77,987

AVAILABILITY & DISTRIBUTION OF STEEL

Availability.—The total availability of finished steel during 1966-67 is estimated at 4.9 million tonnes taking into account the indigenous production of 4.4 million and import of 0.5 million tonnes.

The availability of Pig Iron during 1966-67 is estimated at 1.0 million tonnes.

Distribution.—Allocation during 1966-67 was confined to the following categories of Steel:—

- | | |
|---------------------------------------|-------------------|
| (1) B. P. Sheets 16-26 G. | } Tested quality. |
| (2) B. P. Sheets (thinner than 26 G.) | |
| (3) M. S. Plates Below 8 mm | |
| (4) M. S. Plates 8mm and above | |
| (5) Black Corrugated Sheet. | |

In addition to the above, allocation of Tata's tested skelp was made to the manufacturers of pipes and tubes and for strapping.

As the production of G.P. and G.C. Sheets has been drastically cut, no allocation for these two categories has been made. Urgent demands for these categories were met by arranging supplies against outstanding orders.

Distribution and price control on billets was withdrawn with effect from the 14th January, 1967. Price and distribution control over all categories of steel has been removed with effect from 1-5-1967.

PRICES

The following changes in the prices were made during the period from 1-3-1966 to 17-12-1966:—

- (1) General revision on the basis of revised classification of Plates and Sheets according to I.S.I. standard (Price circular No. 3 of 1965 dated 22-4-1966).
- (2) Extra List No. 1 of 1966 dated the 23rd April, 1966.
- (3) PRI/Cir/7(A)/66, dated the 1st September, 1966. Introduction of Colour Coding Scheme to avoid mix up of the different grades of Steel at various stages from the point of production to the point of actual consumption. This has been notified in the Gazette of India on 1-9-1966.

IMPORTS & EXPORTS

During the year, efforts were continued for import substitution, and diversification and increase in exports.

Import of wire was further restricted, as the indigenous capacity improved. With effect from April, 1966, ordinary and galvanised wire thinner than 16G only was permitted. After the import liberalisation scheme came into force and the availability of zinc improved, the import of galvanised wire was altogether banned with effect from October, 1966. For mild steel and special quality wire thinner than 16G, a condition was imposed, that the actual users will be granted licences for at least 80% of the value of the licence for import of wire rods/billets and the remaining as wire.

Import of stainless steel sheets was allowed for sheets of 18G and thicker only for use in various industries. Later, import of stainless steel strip was allowed for the manufacture of pen-nibs also.

Export of pig iron and billets was also permitted during the year as the availability became easier.

Imports.—During the past 5 years, the quantity and value of steel imported were as follows:

Year	Quantity (In M/tons.)	Value (In Rs.)
		(In tonnes)
1962-63	9,53,561	85.75
1963-64	9,42,156	82.48
1964-65	11,38,528	98.12
1965-66	8,72,168	89.60
1966-67	3,19,949	51.18

(Upto December, 1966)

During the last two years, our import policy has been fairly restrictive, owing to shortage of foreign-exchange. This resulted in considerable setback to the industries based on imported raw materials. In August, 1966, however, Government decided to introduce a liberalised policy for import of iron and steel for the requirements of 59 priority industries. Accordingly, licences for

an approximate value of Rs. 26 crores have been issued under this policy.

In May, 1966, Government allotted a sum of Rs. 1.5 crores for import of steel from the USA and US AID Non-Project loan, 1966. Approximately 400 licences for a total value of Rs. 1.31 crores were issued against this loan.

Since the introduction of the liberalised import policy, the situation has eased considerably. The requirements of the imported steel for small scale industry are generally met from the free currency areas, which enables the small scale users to get the imported steel at reasonable prices.

Import licences for industries not covered by the liberalised import policy are being issued under the periodical ceilings allotted to different sponsoring authorities by the Ministry of Iron and Steel.

Exports.—During the past 5 years, the quantity and value of iron and steel (including pig iron and scrap) exported from India were of the following order:

Year	Quantity (In M/T)	Value (In Rs.)
		(In crores)
1962-63		3.3
1963-64	2,12,317	6.7
1964-65	4,16,986	8.2
1965-66	4,85,224	15.5
1966-67	6,50,637	17.80
(Upto December, 1966)	6,19,552	

The above figures will show that our exports are gradually on the increase. In the beginning of the year 1966-67, a target of 5,05,000 tonnes was fixed for export of finished steel. Due to easier supply position, Government decided in July, 1966, that the categorywise targets fixed for export early in the financial year need not be enforced rigidly and exports in excess of these targets would be allowed after meeting the domestic demand.

The figures given above show the exports upto December, 1966. In the months of January and February, 1967, exports of 63,774 tonnes of steel, and 28,286 tonnes of pig iron have

been made for a total realisation of Rs. 4.36 crores. Besides these exports already made, substantial orders have been booked from foreign buyers, for which the shipments will continue in the next financial year. Hindustan Steel Limited alone has booked orders for over Rs. 20 crores for steel and pig iron.

There are formidable problems in expanding the export trade to the half-million tonne level, not the least of which are rail transportation, shipping capacity, ocean freights, port facilities and labour troubles which have persistently occurred at one of the important ports. A Steel Exports Committee has been appointed to look into all problems connected with export of iron and steel and also to fix export targets for the next five years.

Hindustan Steel Limited also sent a delegation to about a dozen countries in Africa and middle east Asia to survey the markets and discuss requirements and supplies of steel (specially rails) to these countries. We have exported rails/steel to Sudan, Iran, South Vietnam, Saudi Arabia, Jordan, Kuwait, Iraq, U.A.R., Ceylon and several other countries. Japan is the principal buyer of pig iron. Hindustan Steel Limited alone has received orders of 400,000 tonnes of pig iron from Japan, to be supplied during 1966-67 and 1967-68. Hindustan Steel Limited has also exported 10,000 tonnes of hot-rolled sheets to U.S.A. The re-rollers have exported 113,748 tonnes of re-rolled products in 1966-67, (till February, 1967).

HINDUSTAN STEEL LIMITED

During the year under review, the activities of Hindustan Steel Limited consisted of the operation of the steel plants, the coal washeries at Dugda, Bhojudih and Patherdih, the erection of the major units of Alloy Steel Project at Durgapur and the operation of the units already commissioned in this Unit. Besides all this the expansion programmes of the three Steel Plants were also in progress.

No addition was made to the subscribed share capital of the Company which stood at Rs. 5280 million at the end of the year (1965-66). An additional loan of Rs. 684 million was obtained from the Government during the year raising the total amount of loan to Rs. 5005 million. The interest provision made during 1965-66 amounted to Rs. 179 million.

ROURKELA STEEL PLANT

The output of the principal units during 1966-67 compare as follows with the corresponding output during 1965-66:—

	1965-66	'000 tonnes 1966-67
Coke (Dry)	1201	1272
Iron (Hot Metal)	1084	934
Ingot Steel	1086	943
Salable Steel	787	683

The decline in production of the principal units was mainly due to the reduction in Hirakud power supply for about 6 months during the year and the shutting down of one of the blast furnaces for more than 3 months for relining purposes, which restricted hot metal supply. There was a distinct improvement in the production of tested steel. Tested steel constituted 63% of the total finished steel production during 1966-67 compared with 52.7% during 1965-66.

As in the last year, the Rourkela Fertiliser Plant worked at a level lower than the rated capacity, due to shortage of coke-oven gas. Steps are in hand to instal a naptha steam reforming unit to supplement gas supply. This is expected to be commissioned in the latter part of 1968.

Sales.—There was a general decline in the demand for iron and steel materials, which itself is a part of the slump in the economy. The slump in the market resulted in some addition to the pig iron stock, but did not in general affect the disposal of finished steel. The details of despatches and stock position for the period April to December, 1966 in the Plant are as follows:—

Despatches

(in '000 tonnes)

Pig Iron	15
Steel Ingots	..
Rolled Steel	497
3 MoS & M—3	

Stock

(In '000 tonnes')

Pig Iron		Rolled Steel	
1-4-66	1-3-67	1-4-66	1-3-67
37	59	49	57

The despatch of standard tested materials increased to 71% during the year as compared to 52% during 1964-65, as a result of augmentation of testing facilities at the Plant.

Expansion.—A new L.D. Converter No. 4 has been commissioned and the 5th one is due to be commissioned shortly. The cold rolling mill, pickling, degreasing, electrolytic tinning and galvanizing lines are expected to be completed in the second quarter of 1967. The work on the 4th blast furnace has been hampered because of the supply of under-sized refractories by the foreign suppliers.

Mines & Quarries.—The Barsua Mines worked to 71% of its rated capacity as compared to 46% of the rated capacity during 1964-65. An order has been placed for a Beneficiation Plant on a Japanese firm to beneficiate the Barsua Ore. As in the previous year, Ore supplies were supplemented from market sources, but because of certain difficulties experienced by the Minerals and Metals Trading Corporation keeping up their commitment, which led to critical stock position, contracts were entered into with mine owners in Orissa for the supply of quality ore on short-term as well as long term basis.

During 1965-66, the Purnapani Lime Stone Quarry worked to the same extent as during 1964-65.

A limited project has already been taken in hand for mining of high-grade iron ore at Kalta near Rourkela, the supplies from which will mostly go to Durgapur. It is, expected that the deposits located near Kuteshwar in Madhya Pradesh will be promising as far as steel melting shop grade limestone is concerned. This will be exploited by Bokaro Steel Limited and limestone will also be available for the needs of Rourkela and Durgapur, specially the latter.

Foreign technicians.—There was a further reduction in the number of foreign technicians employed on operation and maintenance of the Rourkela Steel Plant. There were 27 such experts at the end of February, 1967 in the Plant compared to 32 at the end of March, 1966.

BHILAI STEEL PLANT

Production.—The production of the principal units in the Bhilai Steel Plant during 1966-67 compared with production during 1965-66 as follows:—

	Tonnes	
	65-66	66-67
Coke (Dry)	1725	2090
Iron (Hot Metal)	1632	2052
Ingots Steel	1371	1852
Salable Steel	1028	1328

As the foregoing statement shows, the production was higher in all the principal units during 1966-67 as compared with the production in 1965-66, due to the commissioning of the units forming part of 2.5 million tonnes expansion.

New sections like chequered plates, shell bars, ribbed sole bars for export to Egyptian Railways and various sizes of channels were developed during the year under review.

Sales.—The despatches and stock position during the period April to December, 1966 were as under:—

Item	(in '000 tonnes)	
	Despatches	
Pig Iron		350
Steel Ingots
Rolled Steel		994

The despatch of standard tested materials increased to 80% during the year as compared to 68% during 1964-65, as a result of augmentation of testing facilities at the plants.

Stocks.—There were substantial additions to the stocks of pig iron and steel ingots as can be seen from below:

		in '000 tonnes)	
Pig Iron		Rolled Steel	
1-4-66	1-3-67	1-4-66	1-3-67
45	83	55	171

The accretion to stocks reflected the adverse market conditions which prevailed during the year.

Expansion.—The expansion of the Bhilai Steel Plant is almost complete excepting the completion of Wire Rod Mill on the Mill side due to delay in supplies from USSR. The third sinter belt, the additional turbo blowers and the open hearth furnaces have all been completed and reconstruction of No. 6 Open Hearth Furnace is in progress. The Coke Oven Battery No. 5 was commissioned in December, 1965 and Battery No. 6 and Blast Furnace No. 5 were commissioned in November, 1966.

A Detailed Project Report for the Slag Cement Plant of 0.8 million annual capacity utilizing blast furnace slag has been prepared and has been examined by a Technical Committee.

Expansion during the Fourth Plan.—The expansion of the Bhilai Steel Plant beyond 2.5 million tonnes steel ingots within the Fourth Plan Period is envisaged in two phases, the first phase being the coke and iron making facilities and the second steel making and rolling facilities. The first phase of the programme relates to setting up of a sixth blast furnace complex. For implementing this, contract has also been entered into between the Government of India and the Government of USSR. Orders have also been placed on Heavy Engineering Corporation for supply of about 44% of equipment and 64% of structurals.

The cost of the Sixth Blast Furnace Complex exclusive of the additional sintering plant facility and certain other modifications like fuel injection which are separately under consideration is estimated at Rs. 287.58 million with a foreign exchange component of Rs. 91.06 million. The USSR Government have agreed to provide the necessary foreign exchange out of the Indo-Soviet Credit Agreement of February, 1961.

As regards the phase II expansion i.e. steel making and rolling facilities, the preliminary reports prepared by the Design Cell of Bhilai Steel Plant were discussed with a team of Soviet Experts who visited India and in accordance with the decision taken thereon, a techno-economic study was undertaken to consider the pattern of expansion. The Techno-economic report prepared is under consideration by the Hindustan Steel Limited. The report has dealt with three alternatives for expansion of the Bhilai Steel Plant beyond 2.5 million tonnes. After the pattern to be adopted for the expansion is decided, a detailed project report will be prepared by the Design and Planning Department of the Bhilai Steel Plant.

The Government of India has recently signed a Credit Agreement for a loan of 300 million Roubles with the Government of USSR which would cover the expansion of the Bhilai Steel Plant.

Mines and Quarries.—During the year under review, the entire iron ore requirements were met from the captive mines at Rajhara, which worked to 99% of the target. The requirements of limestone were met from the Nandini Limestone Quarry. Expansion plans are under way to develop the mine at Jharandhalli and Rajhara to meet the additional requirements of iron ore required for the 2.5 M.T. expansion.

Foreign Technicians.—The number of foreign technicians in the works departments in the Bhilai Steel Plant was 65 at the end of February 1967 as compared with 74 at the end of March, 1966. In addition, 14 foreign technicians were employed in the Central Engineering & Design Bureau and 10 in the Bhilai Design Cell.

DURGAPUR STEEL PLANT

Production. The production in the principal units of Durgapur during 1966-67 compare as follows with the corresponding production during 1965-66:—

	(000 tonnes)	
	1965-66	1966-67
Coke Dry	1350	900
Iron Hot metal	1280	897
Ingots Steel	1001	771
Salable Steel	684	544

The decline in production was due to the serious deficiency in the Coke Oven Department and adverse market conditions. Steps are in hand to set matters right in the Coke Oven Department.

New sections like heavy plates were developed during the year under review. Production of tested steel increased in all the mills. Percentage of surface rejections was brought down in Merchant Products.

Sales.—The despatches and stock position during the period April to December, 1966 were as under:—

Item	(in '000 tonnes)	
	Despatches	
Pig Iron	157	
Steel Ingots	..	
Rolled Steel	437	

Stacks

		Rolled Steel	
1-4-66	1-3-67	1-4-66	1-3-67
12	2	53	61

The despatches of standard tested materials was 73% during the year under review.

Expansion.—The schedule of expansion was adversely affected by an accident in the blast furnace No. 4 during construction and the failure of the contractors to keep up the schedule on the coke ovens and by-products units. The additional tipplers in the washery coils are ready and the pig-casting machine No. 3 supplied by the Heavy Engineering Corporation has already been commissioned. The skelp mill is expected to be commissioned during the first quarter of 1967 according to schedule.

A decision has been taken to expand the plant to 3.4 million tonnes during the 4th Plan period. The British Consortium of suppliers—Brisel has submitted tenders for various units, which are under examination.

Mines and Quarries.—The requirements of principal raw materials were met by market purchase, as in the previous year, the principal supplier of iron ore being M/s. Bolani Ores Limited. Since Bolani Ores expansion did not come up as expected, contracts had to be entered into with other mine owners to build up adequate stocks. As mentioned earlier, a limited project is being worked out in Kalta near Rourkela.

Foreign Technicians.—The number of foreign technicians employed on operation and maintenance in the Durgapur Steel Plant at the end of February, 1967 was 7 compared with 28 at the end of March, 1966.

Government have appointed Shri G. Pande, an ex-Chairman of Hindustan Steel Limited to look into the problems of the Durgapur Steel Plant as an integrated unit.

BOLANI ORES LIMITED

For the development and operation of the mines in the Gua region of Orissa for supply of iron ore to Durgapur Steel Plant, a company named Bolani Ores Limited was set up in June, 1957 by the Government of India in collaboration with the Orissa Mineral Development Company. The present share capital of the Company is Rs. 10 million. Of this, the Government of India hold 50.5% shares, while the remaining 49.5% shares are held by the Orissa Mineral Development Company.

The first phase of mining has already been completed and the Company is currently producing 2 million tonnes of iron ore per year. The supply of ore to Durgapur Steel Plant started in April, 1960.

Production & Despatches of Iron Ore:

			(In tonnes)
Production		Despatches	
During 1965-66	During 1966-67 (anticipated upto 31-3-67)	During 1965-66	During 1966-67 (anticipated upto 31-3-67)
15,93,000	13,35,000	15,95,000	13,00,000

Expansion.—The proposal to seek a foreign exchange loan from US, AID for expanding the Bolani Ores into a fully mechanised mine to produce 3 million tonnes of iron ore per annum has been dropped. The Company withdrew their application as they anticipated that the expansion would not be profitable for some time considering the expenditure involved and the likely level of prices obtainable for their ore.

ALLOY STEELS PROJECT

The total domestic demand of alloy steels by the end of Fourth Plan Period is estimated to be 500,000 tonnes per annum. To achieve this production a capacity of nearly 800,000 tonnes has been sanctioned. This includes a capacity of 257,000 tonnes in the Public Sector.

A capacity of about 50,000 tonnes has already been installed in the private sector and another 50,000 tonnes is under installation. About 30,000 tonnes of it is likely to materialise during the year 1967-68.

In the public sector, Alloy Steel Project Durgapur started producing alloy steel ingots in January, 1965 and processing into finished products was undertaken during 1966. Its present production capacity is about 10,000 tonnes per annum. The remaining units of this Plant are likely to be commissioned during the year 1967-68 when the installation of facilities for the full production of 60,000 tonnes in the first stage will be completed. The Forge Shop and a part of the Bar Mill has already gone into operation alongwith the Steel Melting Shop which went into operation in 1965.

During the Fourth Plan Period, the capacity at Alloy Steel Project, Durgapur will be increased from 60,000 tonnes to 180,000 tonnes per annum.

Ferro Alloys form an important raw material for the production of steel. India is self-sufficient in the requirements of ferro manganese and ferro-silicon. Production has also been undertaken in a small way during the year under review for the production of some other categories of ferro-alloys. Capacity for the requirements of some of the other important ferro alloys has been licensed and it is expected that these units will go into production during the next 2-3 years. A considerable part of the requirement of ferro-chrome and some other ferro-alloys is expected to be met from production within the country.

CENTRAL TRANSPORT & SHIPPING OFFICE

The Shipping and Transport Office of Hindustan Steel Limited at Calcutta handled 1,17,000 tonnes of imports and 168,000 tonnes of export during the year under review upto December, 1966. Following the intensive export drive, this office had to handle increased amount of export cargoes at Visakhapatnam and Kakinada Ports, where the strength of office has been augmented for this purpose.

Efforts are being made to overcome the difficulty arising out of the congestion and lack of handling facilities at the ports.

CENTRAL ENGINEERING & DESIGN BUREAU

It has been decided to merge the Design Cell at Bhilai which was functioning under the control of the General Manager, Bhilai Steel Project, with the Central Engineering & Design Bureau and proposals are being worked to complete the merger. The overall expansion of Rourkela and Durgapur is progressing under the supervision of the Central Engineering & Design Bureau. As has been mentioned already, they prepared their expansion Project Reports for Rourkela (2.5 million tonnes) and Durgapur (3.4 million tonnes) which have already come to form the basis for submission of tender by the British Consortium-Brisel.

SALES (GENERAL)

The gross value of sales during 1965-66 amounted to Rs. 2388 million against Rs. 2048 million in the previous year. Hindustan Steel Limited Plants accounted for 77% of the pig iron produced for sale in the country and 44% of the finished steel. Through the production of pig iron for sale, electrodes, quality billets, hot rolled and cold rolled coils, sheets, sleepers etc., which are mainly produced by Hindustan Steel Limited Plants only, Hindustan Steel Limited continued to serve the major industries in the country.

More than 981,000 tonnes of finished steel was distributed to Defence, Railways and other Government departments and undertakings during the year under review. Despatches of special steels amounted to 131,932 tonnes as compared to 82,981 tonnes in the previous year.

A new branch sales office was opened in Jullundur, bringing the total number of branches sales offices of Hindustan Steel Limited to 9, which cover nearly all the important steel consuming centres of the country. In addition to the branch sales offices, stockyards were opened in Kanpur, Hyderabad, Bombay, Ahmedabad, Cochin and Bangalore. The establishment of the branch sales offices and stockyards has contributed to stabilising the prices of iron and steel materials in the major steel consuming centres of the country.

Testing facilities were augmented in all Plants to implement the Indian Standard Institution Certification Scheme in full measure as a result of which the despatch of standard tested materials increased during the year under review.

Exports.—Hindustan Steel Limited has put in vigorous efforts for increasing the exports of its products. A delegation was sent to a dozen African and Middle-East countries to survey the market and to develop contacts. Another delegation was sent to Australia and New Zealand to survey the rail market. The following table shows the exports in 1965-66 and 1966-67 (upto February) made by Hindustan Steel Limited.

(Quantity in tonnes)

1965-66	
Bars & Rounds	16,913
Structurals	9,019
Flats	12,214
Rails	18,439
1966-67 (upto February 1967)	
Pipes	11,153
Rounds/flats and structurals	46,225
Sheets	10,455
Rails	10,925

Pipes—Contract for export of 3,500 tonnes of pipes to Kuwait at a value of Rs. 3.7 million was concluded in October, 1966.

The fob value of the exports made by Hindustan Steel Limited in 1966-67 (upto February 1967) is approximately Rs. 7 crores.

TRAINING AND MANPOWER

The total number of trainees on the rolls of the Technical Institutions in the Plants as on 31st December, 1966 is as follows:—

Plants	Apprentice trainees		Other trainees		Graduate Apprentices		Trainees from Sister Plants		Other Under-takings		Total
	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	
Bhilai	377	411	101	106	36	36					990
Durgapur	242	536	189	48	23	1033					
Rourkela	315	920	198	16	65	1514					
Alloy Steels	117	25	29			171					

Employee training schemes are in hand for all possible redeployment of staff for manning new units with the minimum of additional personnel.

The Management Training Institute of the Company conducted 29 courses during the calendar year 1966 in which a total of 600 management personnel participated.

The number of employees sent abroad on training for the calendar year 1966 is as follows:—

Bhilai	62
Rourkela	15
Durgapur	12
Alloy Steels Project	19

There was a large reduction of temporary construction personnel as construction tapered off in Bhilai, the number being reduced from 16,300 in April, 1965 to 8,880 in August, 1966.

INCENTIVE BONUS

The approved production incentive scheme continued to be operated in Rourkela and Durgapur during the year under review. In Bhilai, the earlier scheme is still in operation. Bonus under payment of Bonus Act was distributed to the employees of the Company in all the Plants and Units which became entitled for payment of bonus during the year under review. An incentive bonus scheme for Fertilizer Plant at Rourkela and Coal Washeries Project has been formulated and brought into force.

INDUSTRIAL RELATIONS

On the whole, industrial relations in the plants during the year under review continued to be satisfactory except for some disturbances in the Durgapur Steel Plant.

An agreement was reached on the constitution of a Joint Standing Committee on Wage Differentials both at the Company and at the Plant levels.

A scheme of gratuity has been formulated to provide further benefits to the employees. Agreements with the Unions

have been signed for the implementation of the same at Durgapur Alloy Steels Project and Bhilai Steel Plant. Negotiations with the Union at Rourkela in this regard are continuing.

Accidents were reduced as a result of safety drive during the year under review and both Rourkela and Durgapur Steel Plants were given the National Safety Award in 1965.

FINANCIAL RESULTS

Despite various setbacks to the national economy during the year ending 31st March, 1966, the Company was able to make a net surplus of Rs. 16.66 million as follows:—

(Rs. in million)

	Net Surplus	Net Deficit
Rourkela	50.36	..
Bhilai	15.52	..
Durgapur . . . . .	..	23.13
Fertilizer Plant . . . . .	..	18.17
Alloy Steels . . . . .	..	11.15
Coal Washeries	3.23	..
	<u>69.11</u>	<u>52.45</u>
Net surplus	<u>+16.66</u>	

The cumulative loss from the inception of the Company till 31st March, 1966, stood at Rs. 494 million as compared to Rs. 774 million with

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market, devaluation of currency, etc., the operating results have been encouraging, which was made possible by maintaining a high level of production throughout the year.

COAL WASHERIES

There has been a distinct improvement in production in the Dugda Washery since November, 1965. Earlier the production was affected by frequent breakdowns as well as heavy inflow of unsuitable wagons.

Though the second Coal Washing Plant at Dugda is nearing completion, the construction of the Marshalling Yard by the Railways is behind schedule, and it is expected to be commissioned in the second half of 1967.

In the Patherdih Washery, the contractors have been asked to rectify a number of defects noticed during the previous tests; and guarantee tests have therefore not yet been completed. A Committee was set up to study the difficulties in achieving the full load and performance tests of the washeries and to suggest measures for rectification. They submitted their report on 25th August, 1966.

The Bhojudih Washery operated at 88% of its capacity. Irregular supply of wagons and low supply of coal during the part of the year affected production.

The examination of the Hindustan Steel Limited taken up by the Parliamentary Committee on Public Undertakings in 1964 was completed during the year under review. They submitted their reports on all the units of the Company in April, 1966. The Committee on Public Undertakings have made many valuable suggestions, the implementation of which is under the active consideration of the Company.

A Standing Committee of the Chief Mechanical Engineers of the Plants has been formed to encourage import substitution of spares for the steel plants. Steady progress is being made in this direction. Two exhibitions of spare parts have been held and more are planned.

The report of the Committee appointed by Government under the Chairmanship of Shri H. K. Mahtab, to report on the cost of steel production in India was made available during the

year under review. The suggestions made are being implemented to the extent possible. The Committee have indicated in the report that the ex-works price of steel in India is not at a serious disadvantage compared to domestic steel prices in advanced countries.

A Committee was also appointed to specially look into the question of indigenous procurement of spares for the Washeries. The investigations of the Committee showed that it would be possible to be virtually self-sufficient in this matter which had previously affected the working of the Washeries.

BOKARO STEEL PLANT

Memorandum of acceptance of the Soviet Detailed Project Report on Bokaro Steel was signed by Bokaro Steel Limited on March, 29, 1966, after obtaining Government's approval and with such modifications as were agreed upon between Indian and Soviet sides.

The Detailed Project Report has been prepared for a 4 million tonnes ingot steel plant the 1st stage of which will produce annually 1.7 million tonnes of ingot steel and .88 million tonnes of foundry iron.

The product-mix for 1st stage is :—

(i) Hot rolled light plate, sheets and coils	789,000 tonnes
(ii) Cold rolled sheets and coils	425,000 "
(iii) Additional hot/cold rolled sheets of aluminiumised sheets	150,000 "

The 1st stage of Bokaro Steel Plant will have :—

(i) Coke Ovens Battery (each having 69 ovens)	4
(ii) Blast Furnaces (2000 cu. m.)	3
(iii) Sintering machines (252 sq. m.)	2
(iv) 100 tonnes converters (oxygen blown)	4
(v) Slabbing Mill (1250 mm)	1
(vi) Strip Mill (2000 mm)	1
(vii) Cold Rolling Shop with a 2000 mm mill without sheet coating Department	1

The post-devaluation cost-estimates sanctioned by the Government for the 1st stage of Bokaro Steel Plant amount to Rs. 6206.27 million. These exclude off-site facilities like ore, mines and quarries, township etc., which are estimated to cost about Rs. 504 million approximately which were arrived at after taking into account reduction of Rs. 95 million in the cost estimates agreed to by the Soviet authorities. The authorized capital sanctioned by Government recently for the Company is Rs. 335 crores, raising it from the previous figure of Rs. 100 crores.

Two contracts were concluded on May 3, 1966 by Bokaro Steel Limited with Soviet Organisation, "Tiajpromexport" for supply of equipment, steel structures, refractories, pipes and other goods and for supply of Working Drawings. The Contract value of the Contract for supply of equipment etc., is Roubles 202,204,456 (Rs. 1684 million) and contract value of Working Drawings is Roubles 6,804,000 (Rs. 56.68 million). In accordance with the Indo-Soviet Agreement dated the 25th January, 1965 payment for the total value of supplies of equipment etc. to be received under the contract will be made in twelve equal annual instalments, interest being 2½% on outstanding balances. The supply of equipment etc. is to be completed by July, 1970. Upto February 1967, 243 metric tonnes of equipment and 8,241 metric tonnes of pipes and other goods have been received from the USSR. The drawings are also being received.

About 85% of the Structural Steelworks, 63% of the plant and equipment and 96% of the refractories will be procured from within the country. Heavy Engineering Corporation, Ranchi, Mining and Allied Machinery Corporation, Durgapur; Heavy Electricals, Bhopal, Bharat Heavy Electricals, Hyderabad and Bharat Heavy Elecericals, Tiruchirapally will supply indigenous fabricated equipment, structural Steelworks, machines, cranes ladles and posts, machine tools, conveyor accessories etc. and electrical equipment. Instrumentation Limited, Kctah will also supply precision instruments as approved by the Soviet Organisation.

A contract was signed on January 23, 1967 with Soviet Organisation, Tiajpromexport for a value of Rs. 40 million for the supply of design documentation for the equipment, mechanical articles and structures to be manufactured in India for 1st stage of Bokaro Steel Plant.

A contract with Czech Foreign Trade Corporation "Stroj-export" was signed on January 23, 1967 for supply of 12 diesel electric locos and 13 diesel hydraulic locos alongwith spares at a cost of Rs. 24 million on deferred payment terms.

The Government have recently approved the design and engineering services agreement to be entered by Bokaro Steel Limited with M/s. M. N. Dastur & Co. (P) Limited for the Indian portion of work outside the Soviet scope for a total fee of Rs. 18.35 million.

The construction schedule for Bokaro Stage I has also been finalised in consultation with the Soviet consultants. According to the construction schedule jointly prepared and accepted by both the parties, the first Blast Furnace is to be commissioned by the end of 1969 alongwith two batteries of coke ovens, by-product and sulphuric Acid Plants, one band of sintering plant, auxiliary shops, repair shops and laboratories, power plant, related utilities and cooling pond.

The entire programme for Stage I including cold rolling mill is to be commissioned by the end of March, 1971 i.e., within the Fourth Plan period.

Besides the survey and investigations of the plant site, extensive sub-surface investigations have been carried out as per programme given by Gipromez, with a view to collect reliable data for designing the foundations. About 90% of the earthwork for site levelling awarded in October 1965 to M/s. Hindustan Steelworks Construction Limited at a cost of Rs. 93.59 million, was completed till January 1967. The work on construction siding was also undertaken by M/s. Hindustan Steelworks Construction Limited at a cost of about Rs. 7 million. Upto January 1967, about 93% of the earthwork was completed. The laying of rail tracks and linking was in progress. The construction of a 3-line exchange yard to link the construction siding to the S.E. Railway system was in progress. Regarding the construction of exchange yard and marshalling yard, negotiations are being held between Bokaro Steel Limited and S.E. Railway about the sharing of cost.

With the completion of the site levelling work, the foundation work is due to be taken up shortly. The entire civil engineering work for Bokaro Stage I amounting to Rs. 1,208.29

million has been awarded to M/s. Hindustan Steelworks Construction Limited. They have, in turn, invited tenders for the work which are being processed. The total structural steel-work to be fabricated in India for stage I amounts to Rs. 577 million. This work has also been awarded to Messrs. Hindustan Steelworks Construction Limited.

Consequent upon finalisation of the Detailed Project Report, the estimate of total land required for the plant, ancillary facilities, the township and the Garga dam and its reservoir has been revised to 29,788 acres. In addition, the railways' requirement for their marshalling Yard and colony is estimated at 1466 acres. Against the total of 31,254 acres of land required (revised figures), about 16,139 acres of land was acquired by the Government of Bihar and delivered to Bokaro Steel Limited up to January, 1967. The work on the rehabilitation of the displaced persons is simultaneously in progress. 1,235 families were shifted to the rehabilitation site till January, 1967. Bokaro Steel Limited have made arrangement at their cost for technical training of displaced persons in various Industrial Training Institutes in the neighbourhood.

91% of the work has been completed on Garga dam. Partial storage of water in the reservoir had also been built up during the last monsoon. The construction of Dam over the river Damodar at Tenughat which will supply industrial water to the plant was also taken up by the Government of Bihar. The Damodar Valley Corporation has agreed to meet the full requirement of power for construction. The supply from their Chandrapura Thermal Power station across the river Damodar at 11 KV had already commenced.

In order to develop Bhavanathpur Limestone Quarry to meet the requirement of limestone for the blast furnace, a contract was signed on 24th September, 1965 with the Soviet organisation, Messrs. Tiajpromexport for deputing Soviet specialists to India for rendering technical consultation in the designing of a limestone quarry. With the assistance of Soviet experts, a Project Report for Bhavanathpur Limestone Quarry was under preparation and is due to be completed shortly. The work was in progress on Meralgram-Bhavanathpur rail line being built as a deposit work for this Company by the Railways at an estimated cost of approximately Rs. 40 million. The Bokaro Steel Limited have arranged pilot plant tests of the Coal blends required for

Bokaro Plant at the C.F.R.I. and the industrial scale tests will be carried out at one of Hindustan Steel Limited's Steel Plant.

As at the end of January, 1967, 123 Graduate Engineers, 141 Student Engineers and 291 displaced persons trainees were undergoing training. Hostels being built at Rourkela, Bhilai and Durgapur for accommodating graduate engineers and operative trainees of this Company to be trained at these public sector steel plants were nearing completion. There were 2,623 employees including 29 Soviet specialists as at the end of January, 1967.

The residential complex of the steel plant has been named as "Bokaro Steel City". Besides 600 temporary houses, 500 labour hutments, a guest house and a 50 roomed hostel, 992 permanent houses, a temporary 50-bedded hospital, the construction of a temporary office building complex, 24 B-type houses for Soviet specialists and a 200-room Bokaro Hotel building have been completed. The work on the construction of additional 780 houses was in progress. The construction of another 2,520 houses including 300 'C' type houses for Soviet specialists along with the connected public buildings and services has been sanctioned. Tenders had been invited.

HINDUSTAN STEELWORKS CONSTRUCTION LIMITED

The Hindustan Steelworks Construction Limited has been set up under the administrative control of this Ministry with the object of taking up the construction of steelworks and allied facilities to be set up in future. The authorised capital of the Company is Rs. one crore. To begin with, part of the construction of Bokaro Steel Plant has been entrusted to this Company.

Apart from the site-levelling work of the Bokaro Plant, setting up of a construction yard and providing of rail facilities at Bokaro, awarded last year, the Company has been awarded the contract for civil engineering works and fabrication of steel structurals including erection for the 1st stage of Bokaro Steel Plant, at an estimated cost of Rs. 180 crores. The Company has invited tenders for civil engineering work and these are under scrutiny. The tenders are expected to be finalised by about the middle of 1967. Tenders for fabrication work have also been invited.

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The site levelling work is expected to be nearly completed by April, 1967 and the work on construction yard is nearing completion. More than half the work on providing of temporary rail facilities has been completed.

The paid up share capital of the Company as on 1966-67 is Rs. 23 lakhs, apart from a loan of Rs. 50 lakhs paid during the year 1966-67 for the purchase of earth-moving equipment. For the financial year ended 31st March, 1966 the Company showed gross profit of about 1.3 crores before payment of taxes and dividend; the dividend declared (on share capital of Rs. 5 lakhs @ 15%) was Rs. 75,000, and the Company paid bonus to employees, other than deputationists, at 20%. The Company expects to make gross profits of Rs. 1 crore (before payment of taxes and dividends) for the financial year 1966-67. As on 31st December, 1966, the Company had 128 employees on its rolls.

MYSORE IRON AND STEEL LIMITED

(A Government of Mysore Undertaking)

Mild Steel Expansion.—It was earlier expected that the full production under the expansion programme will be achieved during the year 1966-67. Due to continued teething trouble, this expectation has not materialised. Efforts are continuing to attain full production as soon as possible.

Alloy and Special Steels.—The work on the conversion of facilities already installed at Mysore Iron and Steel Limited to the production of alloy and special steel is progressing. The equipment has started arriving at site and one of the electric furnaces now being installed is likely to be commissioned shortly. Production of special steel has already started with the existing equipment.

Expansion of pig iron capacity.—Equipment required for the expansion of pig iron capacity from 80,000 tonnes to 200,000 tonnes per annum has already been ordered and contracts awarded for Civil Engineering and various other works connected with the implementation of the Project.

The production of alloy steels which was developed during the 1962 Emergency at the integrated Steel Works and other units continued to make progress and met some of the requirements of special steel of the Defence Industry and other engineering industries.

STEEL INDUSTRY IN PRIVATE SECTOR

Tata Iron and Steel Co., Limited and Indian Iron and Steel Co. Limited.—TISCO and IISCO are the two integrated iron and steel works in the private sector. The units manufacture a wide range of products, e.g. saleable pig iron, blooms, billets, structurals, rails, sheets, plates, etc. TISCO have already attained a rated production of about 1.5 million tonnes of saleable steel. To maintain and marginally improve their present production of about 1.5 million tonnes of saleable steel, TISCO will require certain balancing facilities like mine development and ore beneficiation, facilities for self-fluxing sinter, shops etc. TISCO are to meet the foreign exchange cost to be incurred in this connection from a World Bank Loan, which is yet to be negotiated.

IISCO are expanding their steel ingot capacity from 1 million tonnes to 1.3 million tonnes. The foreign exchange cost of this expansion scheme is to be met from a World Bank Loan, negotiated by IISCO in July, 1966.

Re-rolling Industry.—In this field, there are different categories of producers like billet re-rollers, registered scrap re-rollers, etc. The capacity of the re-rolling units and their billet entitlements have been subjects of considerable controversy. In April, 1965, the Government appointed a Technical Committee to make a rational assessment of the capacity of re-rolling mills. The following were the specific terms of reference of the Committee:—

- (a) assess the capacity of re-rolling mills whether working on billets or scrap.
- (b) recommend what types of merchant products the re-rolling mills can roll economically; and
- (c) indicate what units are out-dated and/or uneconomic.

The report is at present under consideration.

Ingots/Billets.—With the expansion of Mukands' steel making capacity, the annual capacity installed is approximately 115,000 tonnes. The Government have now decided that for the production of steel ingots/billets by electric furnaces no

industrial licence under the Industries (Development and Regulation) Act will be necessary if the following conditions are fulfilled:—

- (i) The electric furnaces will be procured indigenously and no foreign exchange will be allowed for importing component/accessories connected therewith.
- (ii) The entrepreneur will arrange for the raw material himself and no Government assistance will be given in this respect.
- (iii) Necessary intimation will be sent by the entrepreneur to Iron and Steel Controller indicating the capacity and the date from which production commences.

With regard to the 3 continuous casting schemes sanctioned earlier, Mukands have already installed their unit and the unit to be installed at Arkonam, it is expected, will be completed in another one and a half year or so. Some more units have recently been sanctioned.

Wire.—There are at present three categories of wire drawing producers. Firstly, there are the units licensed under the Industries (Development and Regulation) Act. Besides these there are also medium sized units, which are sanctioned under the Iron and Steel (Control) Order. In addition, there are also small wire drawing units, which can be set up with indigenously procured plant and raw materials without any permission from the Iron and Steel Controller. All these units cater to the requirements of various kinds of wires like mild steel wires, special wires like tyre-bead, electrode core type, alloy steel and other special quality wires.

Pig Iron.—It has been decided that for the capacity sanctioned in the private/state sector, where schemes still remain to be implemented, the blast furnaces, etc., which can now be made in the country and other related equipment will have to be secured from within the country.

Tinplates.—According to the National Council of Applied and Economic Research, the estimated demand for Tinplates in 1970-71 is expected to be in the region of 524,000 tonnes (including 50,000 tonnes for export). At present, the installed capacity for tinplate is about 200,000 tonnes per annum. In addition, a capacity of about 240,000 tonnes has been licensed. Of this, the Tinplate Co. of India expansion scheme will contribute 90,000 tonnes. The Government have recently accepted

the Company's proposal for their negotiating with I.F.C. Washington for meeting their foreign exchange requirements. It has also been tentatively decided to have an additional capacity of 100,000 tonnes of tinplate per annum when the expansion of the Rourkela Steel Plant takes place during the Fourth Plan. This proposal is under consideration. Thus, in all, a capacity of about 540,000 tonnes per annum is envisaged by the end of the Fourth Plan.

FUTURE DEVELOPMENT

The draft outline of the Fourth Five Year Plan for iron and steel envisages setting up of target capacities of (i) 14.8 million tonnes in terms of steel ingots (ii) 3.0 million tonnes of pig iron; and (iii) 0.5 million tonnes of alloy and tool steel—to be achieved by 1970-71. The mild steel capacity is proposed to be achieved by expansion of the existing five integrated steel works, and by increased capacity from electric furnace units.

It is also proposed to start preliminary work on some new sites which may serve as nuclei for new steel plants in the subsequent plant periods. For location of these plants, several regions have been studied and site location reports obtained.

The target for foundry grade pig iron production in the Fourth Plan is proposed to be achieved by surplus pig iron production from the integrated steel plants and from pig iron units licensed in the private sector and by some of the State Government undertakings.

The demand for alloy steels by 1970-71 is estimated at 500,000 tonnes. In addition, the demand for electrical sheets and low alloy high strength steel has been placed at 150,000 tonnes and 100,000 tonnes, respectively. The latter will be produced by the integrated steel plants. As regards the demand of 500,000 tonnes of Alloy Steels, it is proposed to take full advantage of the built-in capacity in the Durgapur Steel Plant to treble its capacity to 180,000 tonnes of finished steel. Thus on completion of the change over of the Bhadravati Plant to alloy and tool steel with a capacity of 77,000 tonnes a capacity of 257,000 tonnes will materialise in the public sector. Currently, tool alloy and special steels schemes in private sector are in varying stages of development aggregate to 444,000 tonnes. It is considered that between themselves the schemes in

the public and private sector should be able to meet the demand for tool and alloy steel in full. It may be added in this connection that the requirements of Defence as well as of the engineering industry are reviewed periodically to arrange supply from indigenous sources.

To meet the demand for Ferro Alloys by the Alloy Plant Steel Industry, steps have been taken to establish sufficient capacity for various ferro alloys. The country is already self-sufficient in ferro-manganese and ferro-silicon. Production of ferro-chrome is planned at three units and indigenous supplies are expected to be available from 1968 onwards, when the demand for this item is also expected to pick up. Some other ferro alloys are being produced in small quantities.

In order to restrict the requirements of foreign exchange to the minimum as well as to attain self-sufficiency with regard to construction and operation of steel plants, it has been decided to utilise the indigenous capacity which is being developed in the Heavy Engineering Corporation, the Heavy Electricals Corporation and the Mining and Allied Machinery Corporation, to the maximum extent.

For planning of steel production for the 5th and subsequent plan periods, demand study on steel has already been commissioned.

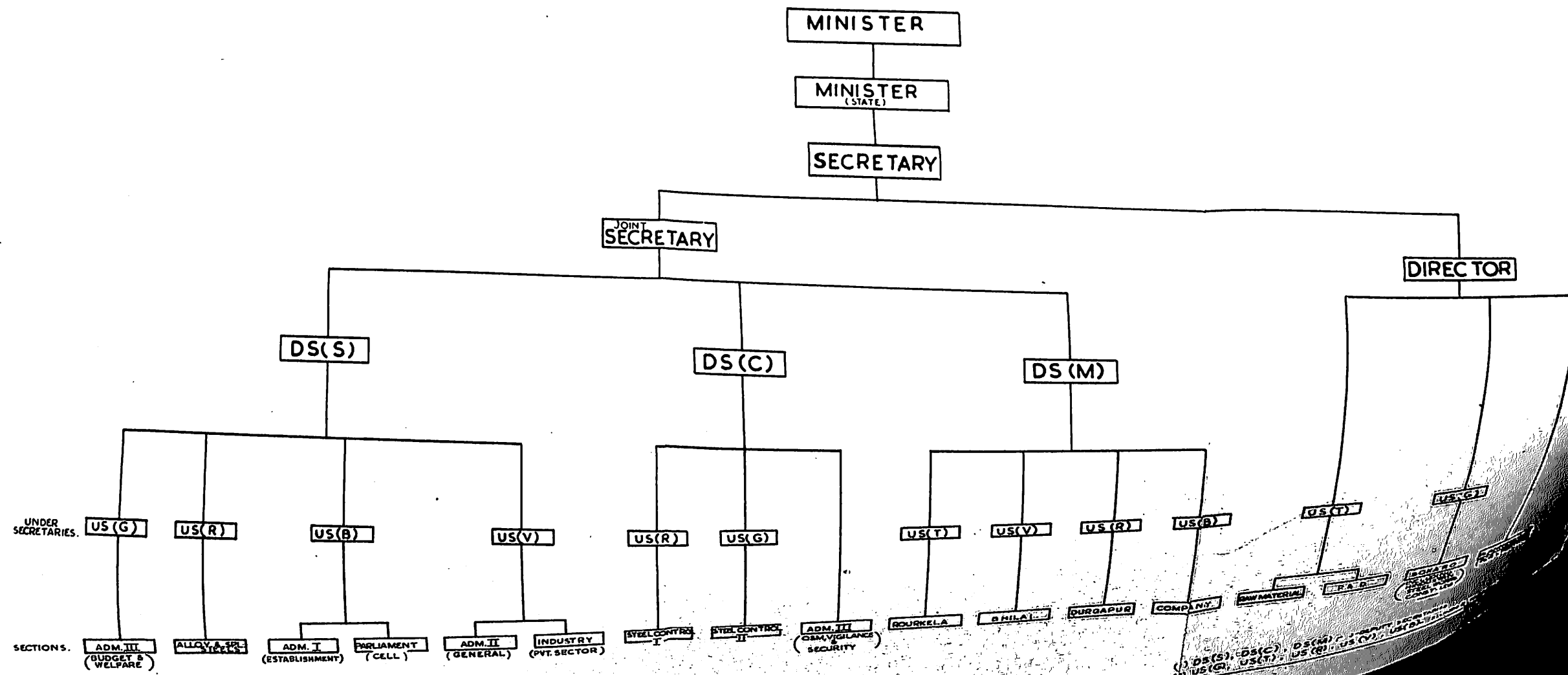
APPENDIX I

List of subjects dealt with in Department of Iron and Steel

1. Steel plants in the public and private sectors, the re-rolling industry and ferro-alloys including all future development.
2. Development of ore mines, coal washeries, etc., for steel plants.
3. Production, distribution, prices, imports and exports of iron and steel and ferro-alloys.
4. Planning, development and control of, and assistance to, all iron and steel industries.
5. All Attached or Subordinate Offices or other organisations concerned with any of the subjects specified in this list.
6. Public sector projects falling under the subjects included in this list except such projects as are specifically allotted to any other Department.

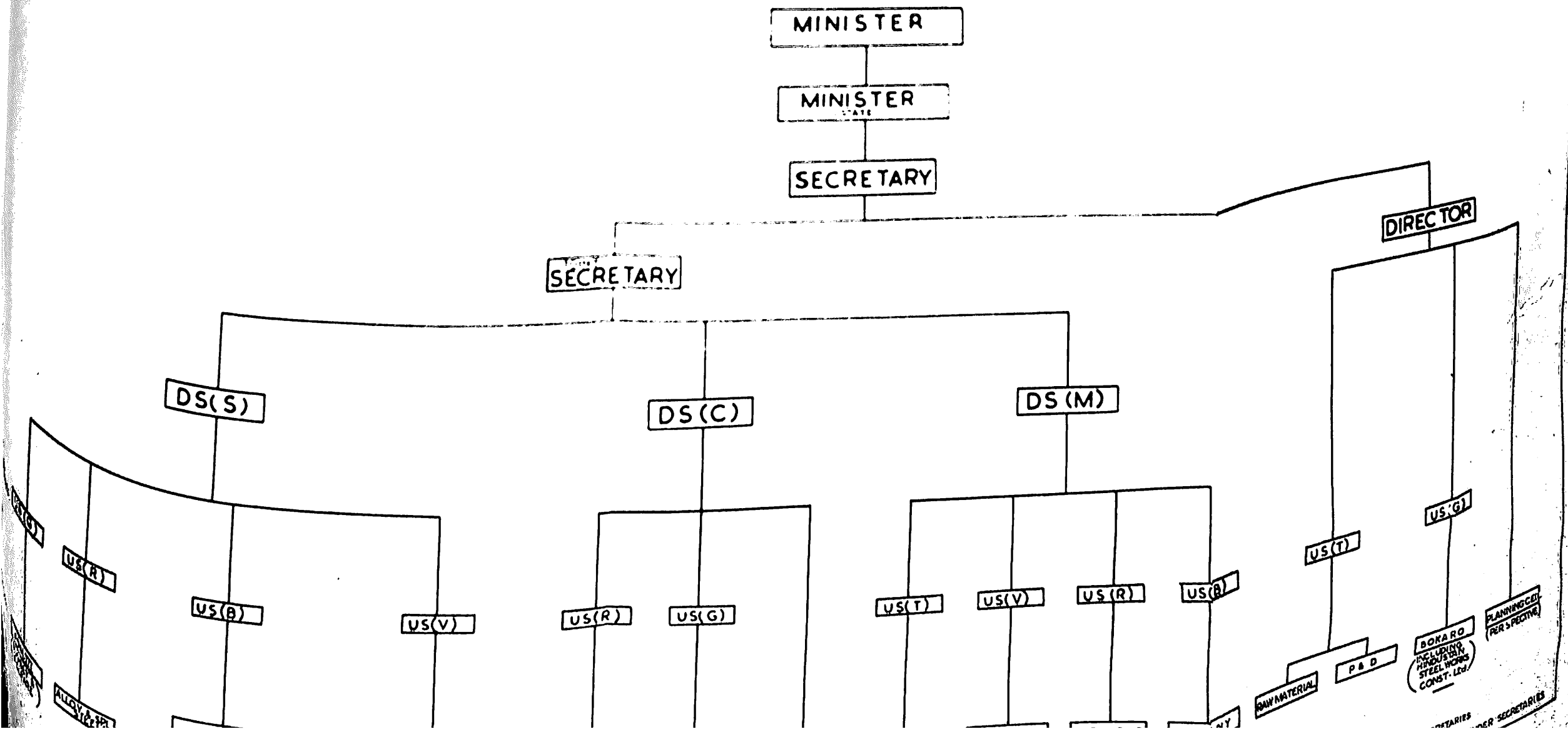
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(AS ON 1.5.1967)



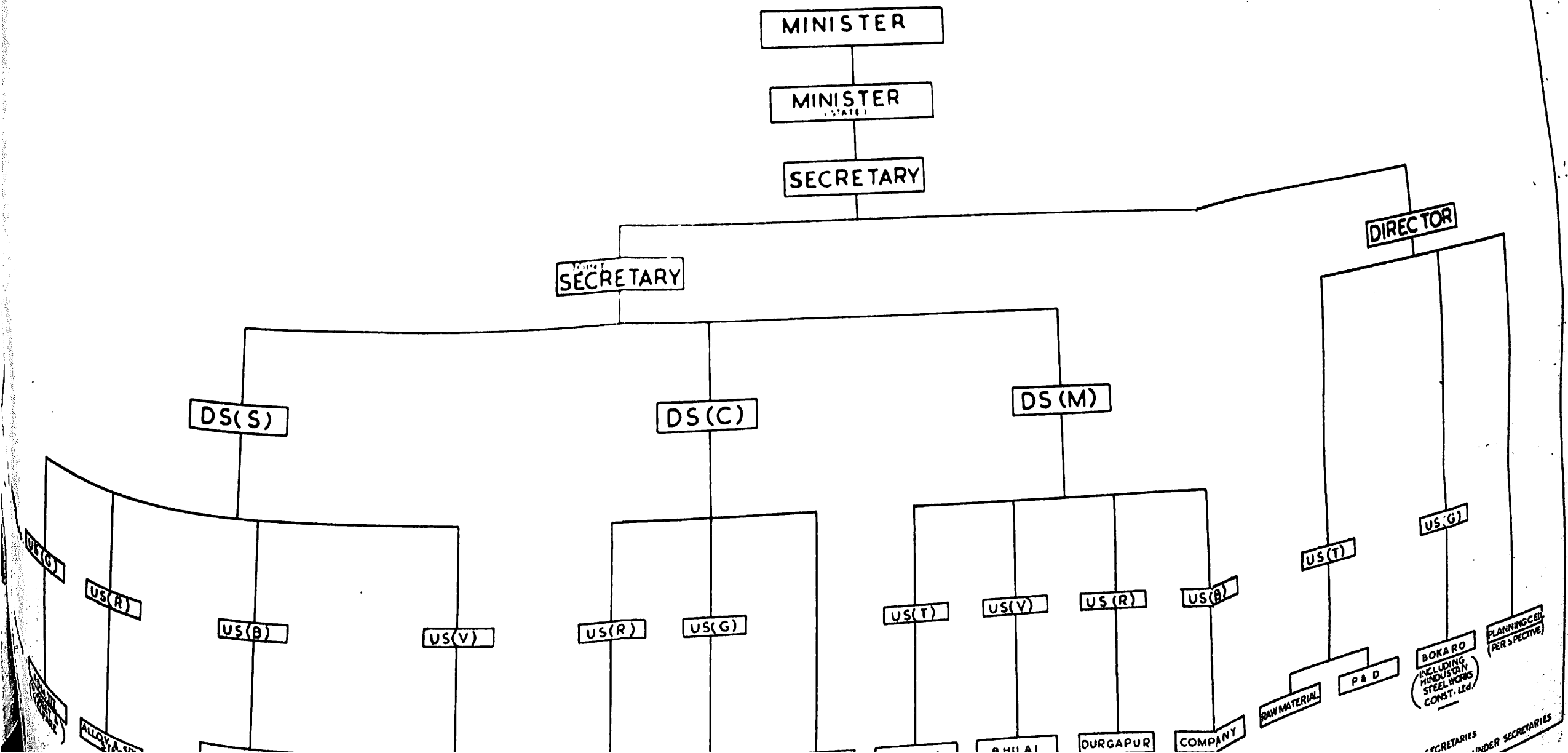
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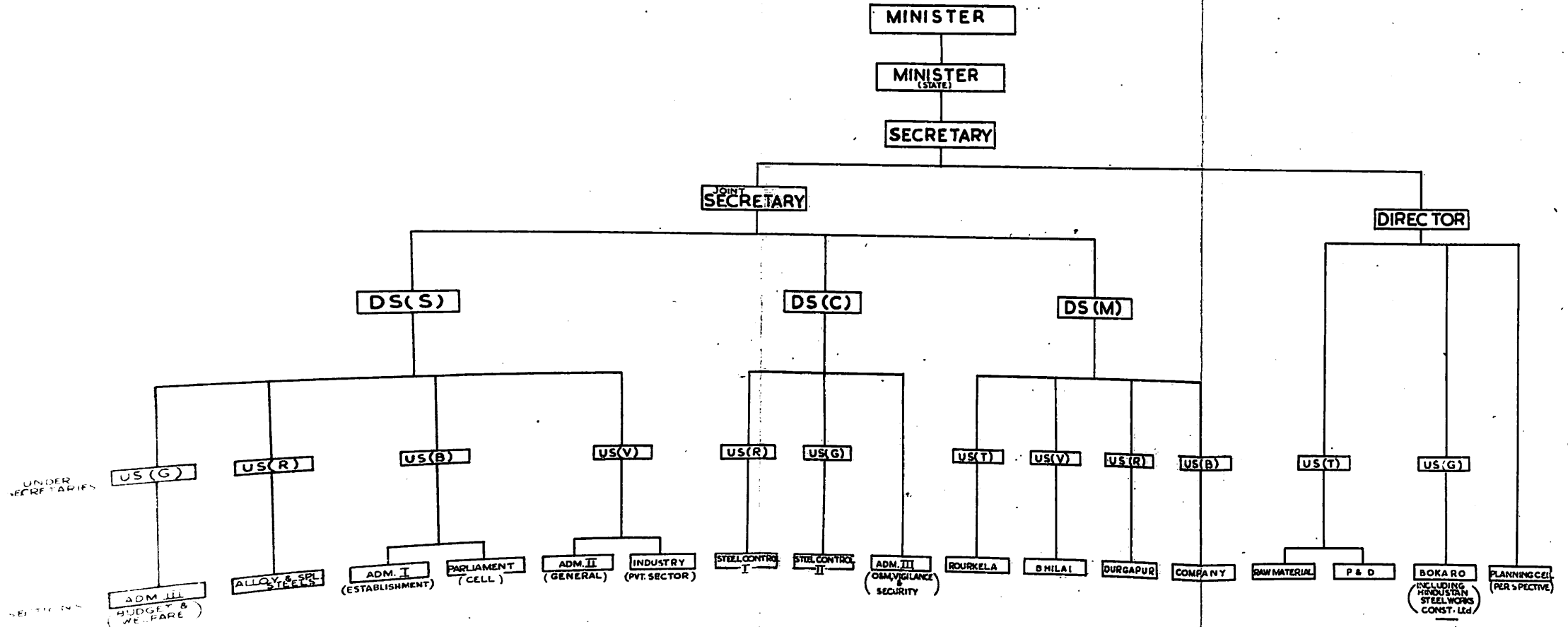
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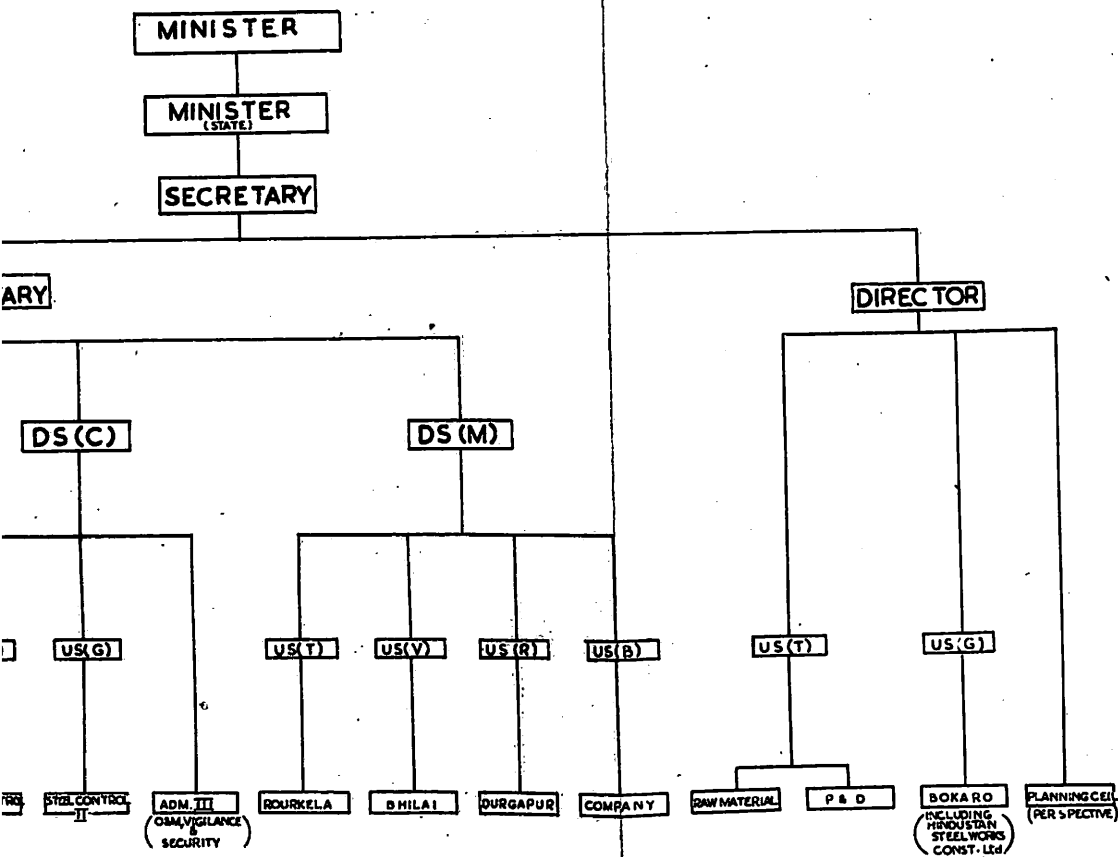
(AS ON 1.5.1967)



(1) DS(S), DS(C), DS(M) - 3-DEPUTY SECRETARIES
(2) US(G), US(T), US(R), US(V), US(B) - 5-UNDER SECRETARIES

ORGANISATIONAL CHART OF BUREAU OF STEEL, MINES & METALS (DEPARTMENT OF IRON & STEEL)

(AS ON 1.5.1967)

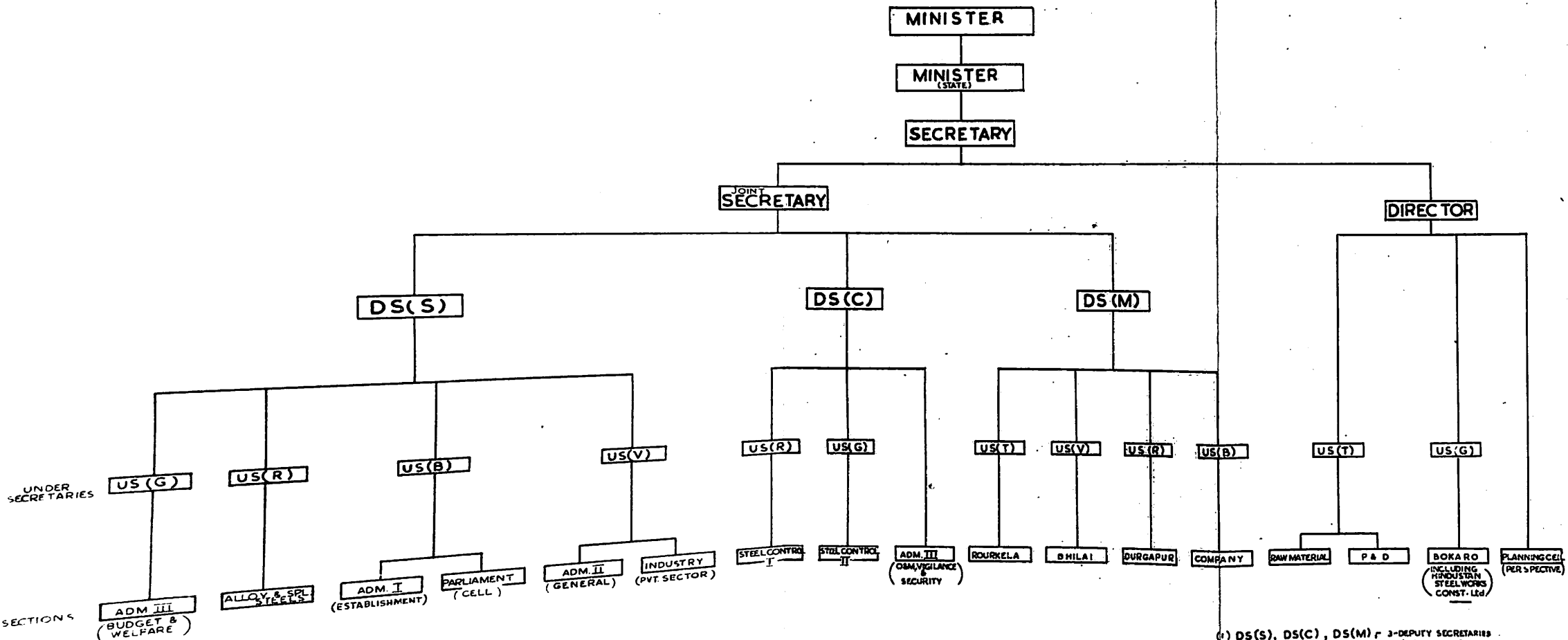


(1) DS(S), DS(C), DS(M) - 3-DEPUTY SECRETARIES

(2) US(G), US(T), US(R), US(V), US(B) - 5-UNDER SECRETARIES

ORGANISATIONAL CHART OF THE MINISTRY OF STEEL, MINES & METALS (DEPARTMENT OF IRON & STEEL)

(A'S ON 1.5.1967)



(1) DS(S), DS(C), DS(M) - 3-DEPUTY SECRETARIES
(2) US(G), US(T), US(R), US(V), US(B) - 5-UNDER SECRETARIES