

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

**MCDR inspection REPORT**

**Bangalore regional office**

**Mine file No :** KNT/BLR/FE/490/BNG

**Mine code :** 30KAR03181

- (i) Name of the Inspecting : **S19** ) **SANDEEP KUMAR SINGH**  
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shri. Awadhesh Kumar Rai-AGM(Mines), Shri Aman Kumar-  
Official with  
Designation
- (iv) Date of Inspection : 16/02/2021
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **TUNGA IRON ORE MINES**
- (b) **Registration NO.** : **IBM/432/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **KARNATAKA**
- District : **BELLARY**
- Village : **HITTANAHALLI**
- Taluka : **SANDUR**
- Post office : **TARANAGAR**
- Pin Code : **583275**
- FAX No. :
- E-mail : **PANDEY.BINAY@JSW.IN**
- Phone : **9448286155**
- (f) **Police Station** : **BANNIHATTI**
- (g) **First opening date** : **25/01/2018**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **ITTANAHALLI VILLAGE, TARANAGAR**  
**correspondance** : **SANDUR TALUK, BALLARI DISTRICT- 583119**
3. (a) **Lease Number** :
- (b) **Lease area** :
- (c) **Period of lease** :
- (d) **Date of Expiry** :
4. **Mineral worked** : **IRON ORE** **Main**

5. Name and Address of the

Lessee : JSW STEEL LIMITED  
JSW Mining office, Near  
Talur Cross Vidyanagar  
Post, Toranagallu Sandur,  
Bellary BELLARY KARNATAKA  
Phone:9448286155  
FAX :

6. Date of approval of Mining :  
Plan/Scheme of Mining

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	21 pits & 11 trenches proposed during the year 2017-18 & 2018-19	8 boreholes drilled during the year 2018-19 with total meterage of 399 m. Also 20 trial pits dug during the year 2018-19.	No Exploration backlog.
1b	Exploration over lease area for geological axis 1 or 2	No proposal	12 bore holes with total meterage of 582 m drilled during the year 2019-20	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not mentioned	Rs 28.22 lakhs expenditure incurred for exploration activities during the year 2019-20	As reported by the Lessee.(Drilling cost 4850/m- Total drilling for the year 2019-20- 582 m)
1d	Balance area to be explored to bring Geological axis in 1 or 2	Not mentioned	3.68 ha under G-3 area	G-1-7.07 ha, G-2-0.6 ha. As reported by the Lessee.
1e	Balance reserve as on 01/04/20	6,026,605 million tonnes of iron ore with grade 59.52 % as on 25.01.2018	5,152,629 tonnes of iron ore as on 1.04.2020.	As per AR 2019-20.
1f	General remarks of inspecting officers on geology, exploration etc	-	-	The exploratory drilling has been carried out as per the proposals.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development proposed in section S4-4', S5-5', S6-6', S7-7', N-1670600 to 1670780, E-675230 to 675350	Actual development carried out within the proposed extent of S4-4' to S7-7'	Nil

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches proposed in OB & mineral.	Separate benches maintained in OB & mineral	Overburden-1 bench, Mineral-1 bench.
2c	Stripping ratio or ore to OB ratio	1:3.11(in tons)	1:0.99(in tons)	Ore- 299997.36 tons Waste- 296697 tons. Violation issued for less OB handling and development
2d	Quantity of topsoil generation in m3	No proposal	Nil	Nil
2e	Quantity of overburden generation in m3	466497 Cum of Overburden proposed	148348 Cum of overburden handled.	As per AR, 2019-20. Violation issued.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Against the proposed overburden quantity of 4,66,497 cu.m, only 1,48,348 cu.m of overburden has been handled for the year 2019-20, thereby leading to 68% less OB handling and development than the approved proposal. Violation issued

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit proposed.	Actual working carried out in One pit.	Nil
3b	Quantity of ROM mineral production proposed	3,00,000 tons proposed	2,99,997.36 tons achieved	As reported in AR 2019-20
3c	Recovery of sailable/usable mineral from ROM production	100 %	100 %	Nil
3d	Quantity of mineral reject generation	No proposal	Nil	Nil

3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Nil	Nil
3f	Quantity of sub grade mineral generation.	No proposal	Nil	Nil
3g	Grade of sub grade mineral generation	No proposal	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized Crushing & Screening proposed.	Mechanized crushing and screening carried out.	Size- 0-10mm(fines) & 10-40 mm(C-ore)
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole Drilling and blasting proposed.	Drilling & blasting carried out . DTH drilling of 100 mm dia & slurry explosives in conjunction with Detonators used for blasting.	Nil
3k	Provision of mining machineries in mineral benches	i)Excavator- 1.4-1.6 Cum- 3 Nos & 0.9-1.1 Cum- 1 no. ii)Tippers-16-18 Cum-11 Nos. iii)Drill-102-115 mm dia- 1 No. iv)Wheel loader- 2 Nos. v)Water sprinklers- 10000 litres- 7 nos.	i)Excavator- 1.6 Cum - 4 Nos & 0.6 Cum- 1 no ii)Wheel Loader- 1 No. iii)Tipper-14 Cum-7 nos. iv)Water tanker-9000 litre-2 nos. v)Drill- 102 mm-1 no	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Proposed Height 8 m for both Overburden and Mineral bench	8 m height maintained for both Overburden and Mineral bench.	Nil

3m	Total area covered under excavation/pits	8.16 ha at the end of plan period (2021-22)	6.69 ha covered under excavation/pits	As reported in AR 2019-20.
3n	Ore to OB ratio for the pit/mine during the year.	1:3.11(in tons)	1:0.99(in tons)	Ore- 299997.36 tons Waste- 296697 tons. Violation issued for less OB handling and development.
3o	Total area put in use under different heads at the end of year	i)Area under Mining- 8.16 ha ii) Waste dump- 13.57 ha iii) Infrastructure & roads- 0.94 ha. v)Green belt& R &R measures- 1.93 ha at the end of plan period (2021-22)	i)Covered under current(O/c) workings- 6.69 ha ii)Waste disposal- 9.4 ha iii) Occupied by Plants, buildings, residential, welfare& roads-1.880 ha. iv)Other purpose(Green belt safety zone, R&R and Future Mining area)- 14.710 ha	The land use (area in ha) as given in Part-I (12) under 12(v) are not reported correctly as per the financial assurance table (Para-8.6) of the last approved document. Violation issued under 45(7).
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 3,00,000 tons 2018-19: 3,00,000 tons 2019-20: 3,00,000 tons (in tonnes)	2017-18: 2,73,983 tons. 2018-19: 2,99,993 tons 2019-20: 2,99,997.36 tons (in tonnes)	Mine operations commenced on 25.01.2018 (Auctioned block)
3q	General remarks of inspecting officers on method of mining etc.	-	-	i)The Mining activities were carried out as per the proposal. ii) The land use (area in ha) as given in Part-I (12) under 12(v) are not reported correctly as per the financial assurance table (Para-8.6) of the last approved document. Violation issued under Rule 45(7).

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping proposed for OB.	Separate dumping maintained for OB.	Nil
4b	Location of topsoil, OB and mineral reject dumps	Proposed OB dump Location- Between Sec- (S1-1', to S5-5'' )	Actual OB dump location- Sec(S2-2' to S5-5')	Due to steep slope there was no approach for dumping towards sec S1-1', accordingly dumping carried out between Sec 2-2' to 5-5'.Dumping will be carried in Sec 1-1' once the approach is made.
4c	Number of dumps within lease area and outside of lease area	2 waste dumps within the Lease area( 1 Proposed dump(PD) + 1 dead dump)	2 waste dumps within the Lease area( 1 Proposed dump + 1 dead dump)	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not mentioned	Outside UPL	Nil
4e	Number of active and alive dumps.	1 Proposed waste dump (PD) proposed for waste dumping.	1 proposed waste dump (PD) is used for waste dumping.	Nil
4f	Number of dead dumps.	1 dead dump inside the Lease area	1 dead dump inside the Lease area.	Nil
4g	Number of dumps established.	No proposal	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall & Garland drain proposed along the proposed waste dump(PD)	Retaining wall and garland drain construction carried out as per the proposal	Nil
4i	Length of Retaining wall or garland drain all along dumps	517 m Retaining wall and 517 m garland drain proposed till end of the plan period (2021-22)	305 m Retaining wall & 285 m Garland drain along the proposed waste dump constructed	(As reported by the Lessee). The current extent of the waste dump is protected by toe wall and garland drain.
4j	Number of settling ponds	GCD, SMCD, RWHP & SST proposed as per the R& R plan	Construction of GCD,SMCD, RWHP are being carried out as per the R&R proposal.	Nil

4k	Specific comments of inspecting officer on waste dump management	-	-	The waste dumping has been carried out as per the proposal. The retaining wall, garland drain, etc. construction along the proposed waste dump have been carried out as per the proposal.
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#### Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	No proposal	Nil	Nil
5b	Area under backfilling of mined out area	No proposal	Nil	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	Nil
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	No backfilling proposals.

#### Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	To be submitted before 1st of July every year	Annual PMCP report for the year 2019-20 submitted on 10.09.2020	Nil

6b	Area available for rehabilitation (ha) .	0.58 ha within Lease.(Green belt development)	0.5 ha	As reported by the Lessee during inspection.
6c	afforestation done (ha).	0.58 ha within Lease.(Green belt development)	.5 ha within the lease	As reported by the Lessee during inspection.
6d	No. of saplings planted during the year	20,000 nos. of plants proposed(Gap filling & Green belt & old dumps)	350 nos. of plants within ML area with 99 % survival rate and 500 nos. of plants outside ML area with 99 % survival rate.	As reported in AR 2019-20. Violation issued.
6e	Cumulative no .of plants	Not mentioned	350 nos. of plants within ML area with 99 % survival rate and 500 nos. of plants outside ML area with 99 % survival rate.(For the year 2019-20).	Nil
6f	Any other method of rehabilitation	No proposal	Nil	Nil
6g	Cost incurred on watch and care during the year	2.57 lakh/hectare proposed	As per the proposal	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	No proposal	Nil	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal	Nil	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring proposed for Air, water, noise& Soil for Core and buffer zone.	Environmental monitoring carried out for Air, Water Noise& Soil for both core and buffer zone.	Environmental monitoring report for Dec-2019 available. All environmental parameters within the permissible limit
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	—	—	Total 20,000 nos. of saplings to be planted in Greenbelt area & old dumps against which only 850 nos. of total saplings are planted for the year 2019-20. Violation issued.

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**Mineral Conservation:**


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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Mechanised Crushing & screening proposed for iron ore	Mechanised Crushing & Screening carried out for iron ore.	Crusher-250 tph Size- 0-10 mm(fines) & 10-40 mm(C-ore)
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No grade wise sorting proposed	No grade wise sorting carried out.	Nil
7c	Different grade of mineral sorted out at mines.	No proposal	Nil	Nil
7d	Any beneficiation process at mines	No proposal	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	—	—	The mineral conservation activities carried out inside mine as per the proposal

## Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation proposal	Nil	Nil
8b	Concurrent use or storage of topsoil	No proposal	Nil	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping proposed for OB.	Separate dumping maintained for OB.	Dumping of waste carried out in proposed waste dump (PD). No mineral reject generation
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	Nil

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal	Nil	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not mentioned.	350 nos. of plants within ML area with 99 % survival rate and 500 nos. of plants outside ML area with 99 % survival rate.(Plantation for the year 2019-20)	Nil
8g	Survival rate	Not mentioned	99% achieved within ML area and outside ML area	As reported in AR 2019-20.
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads proposed	Water sprinkling carried out as per the proposal	Two Water sprinkler of capacity 9 KL used in the mines for water sprinkling.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	The aesthetic beauty in and around the mine looks good.

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#### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. Submitted up to Jan-2021. ***** A.R. of the year 2019-20 submitted on 30.06.2020	M.R. Submitted up to Jan-2021. ***** A.R. of the year 2019-20 submitted on 30.06.2020	Submitted.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	i)Mining Engineer- Shri Aman Kumar ii) Geologist- Shri Raghavendra S. Desai iii) Manager- Shri Prakash M.S	The Mining Engineer & Geologist were present during inspection on 16/02/2021	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	i)Covered under current(O/c) workings- 6.69 ha ii)Waste disposal- 9.4 ha iii) Occupied by Plants, buildings, residential, welfare& roads-1.880 ha. iv)Other purpose(Green belt safety zone, R&R and Future Mining area)- 14.710 ha	The land use (area in ha) as given in Part-I (12) under 12(v) are not reported correctly as per the financial assurance table (Para- 8.6) of the last approved document.	Violation issued.
9d	Scrutiny of Annual return on afforestation	350 nos. of plants within ML area with 99 % survival rate and 500 nos. of plants outside ML area with 99 % survival rate.	Appears to be correct	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Appears to be correct	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	O/s- 0 tons ROM Production- 2,99,997.36 tons C/s- 0 tons	Appears to be correct	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production- Rs 667.95/ton Ex mine price- Rs. 667.95/ton	Appears to be correct	Captive Mines
9h	Scrutiny of Annual return on fixed assets	Rs 272304069 including industrial, plant & machinery & capitalized expenditure	Appears to be correct	Nil

9k	Scrutiny of Annual return on mining machineries	i)Excavator- 1.6 Cum - 4 Nos & 0.6 Cum- 1 no. ii)Wheel Loader- 1 No. iii)Tipper-14 Cum-7 nos. iv)Water tanker-9000 litre-2 nos. v)Drill- 102 mm-1 no vi)Dozer- 1no vii)Motor Grader- 1no. viii)Crusher- 250 TPH	Appears to be correct	Nil
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**Details of violations observed during current inspection and compliance position of violation pointed out**

Violation observed			Show couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	01/03/2021			
MCDR17	Rule 45(7)(a)	01/03/2021			

**Date :**

(SANDEEP KUMAR SINGH)

Indian Bureau of Mines