

Compliance Assessment Report

Report ID:
CAR_NRW0036229

This form will report compliance with your permit as determined by an NRW officer

Site	Port Talbot Steel Works	Permit Ref	BL7108IM			
Operator/Permit holder	Tata Steel UK Limited					
Regime	Installations					
Date of assessment	11/12/2019	Time in	12:30	Out	16:30	
Assessment type	Audit					
Parts of the permit assessed	2 Operations; 3 Monitoring					
Lead officer's name	Cowie, Douglas					
Accompanied by	Bacon-Weekes, Liane					
Recipient's name/position	Claire Grainger/ Environment Manager	Date issued	28/01/2020			

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS Scores can be consolidated or suspended where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
A1 - Specified by permit	A	
B1 - Infrastructure - Engineering for prevention and control of emissions	X	
E1 - Emissions - Air	A	
F3 - Amenity - Dust/fibres/particulates and litter	A	
KEY: See Section 5 for breach categories, suspended scores will be indicated as such. A = Assessed or assessed in part (no evidence of non-compliance), X = Action only, O = Ongoing non-compliance, not scored.		

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Number of breaches recorded is greater than zero, please see Section 3 for our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- The part(s) of the permit that were assessed (eg. Maintenance, training, combustion plant, etc)
- Where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- Any non-compliances identified
- Any non-compliances with directly applicable legislation
- Details of any multiple non-compliances
- Information on the compliance score accrued inc.
- Details of advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Purpose of visit/assessment

Tata Steel uses an integrated coke transfer and de-dusting (fume arrestment) machine to capture dust emissions from coke pushing at Morfa Coke Ovens (MCO). This technique, known as a 'Minister Stein' system, is used at integrated coke, iron and steelmaking operations across Europe and is recognised as best practice.

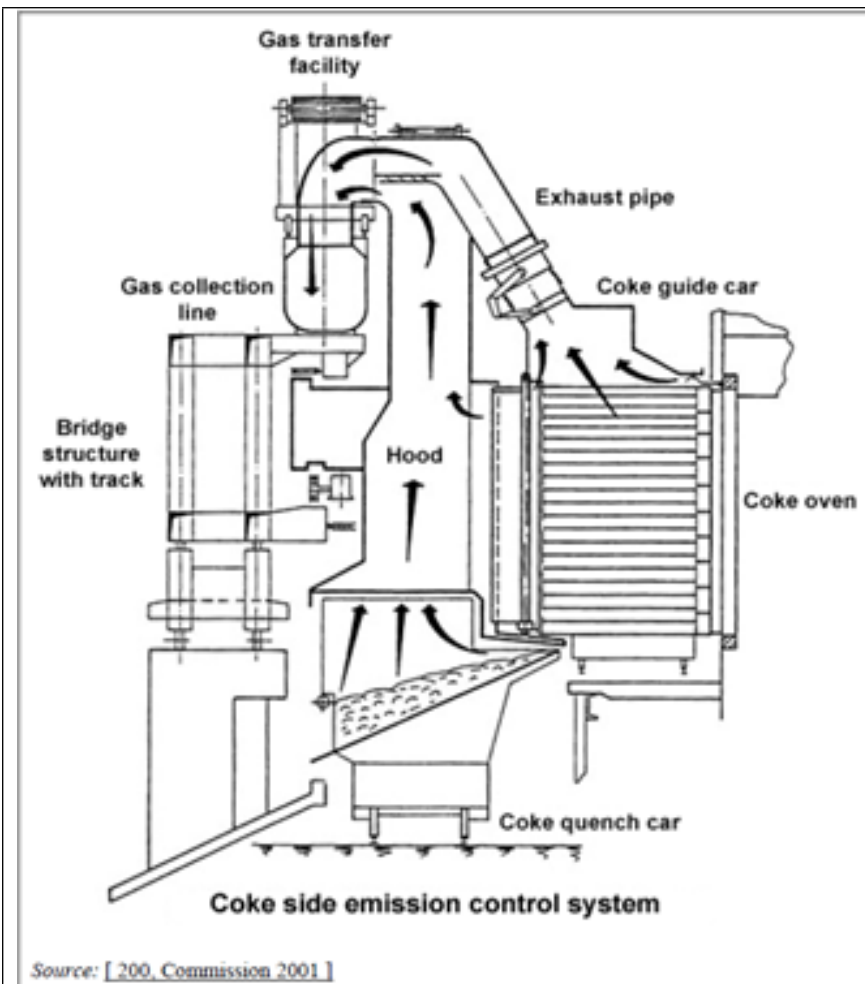
In early 2019, Tata encountered problems with its Minister Stein system which led to a breakdown and extended system outage. During this intervention we inspected the repaired and redesigned system being installed at MCO, which will reinstate coke-side transfer and fume arrestment capability.

We also received an update from Tata Steel regarding the fume extraction systems fitted to its Basic Oxygen Steelmaking (BOS) Plant.

The relevant permit conditions are listed under Sections 2.1, 2.3, 3.1 and 3.2 of Tata's permit.

MCO coke-side guide and fume arrestment system

The Minister Stein system normally comprises a coke guide (transfer) machine with an integrated hood, stationary duct and stationary gas cleaning, preferably by bag filtration. At Port Talbot, a mobile coke quenching car is positioned in the catchment area of the integrated de-dusting hood while red hot coke is pushed into it. An example of such a system is shown in the diagram below.



In early 2019 the guide component of MCO's Minister Stein derailed and caused structural damage to the ducting and hood. Consequently, the system has been offline since March 2019 and coke has been pushed without the fume arrestment hood since the breakdown. Tata Steel has fitted water sprays to the guide car as a temporary fume knockdown (abatement) measure while the hood system is offline.

The existing system was already due for upgrade under planned Capital Expenditure (CAPEX). Following the derailment damage this investment was brought forwards. Our inspection report **CAR_NRW0034781** has previously discussed this issue.

Tata Steel has taken the opportunity to commission a new guide hood which offers enhanced fume capture and extraction capability, rather than a straight replacement for the old system. This new design (and the original system it replaces) is shown below.

1.1 Original Hood

The original hood was designed by Hartung, Kuhn & Co. in 1977 and manufactured by John M Henderson Machines Ltd. The purpose of the duct was to remove the smoke and gases emitted from the coke pushed from the oven so that it can be cleaned before the being vented to atmosphere. Figure 1 is a isometric view on a simplified model of the ducting.

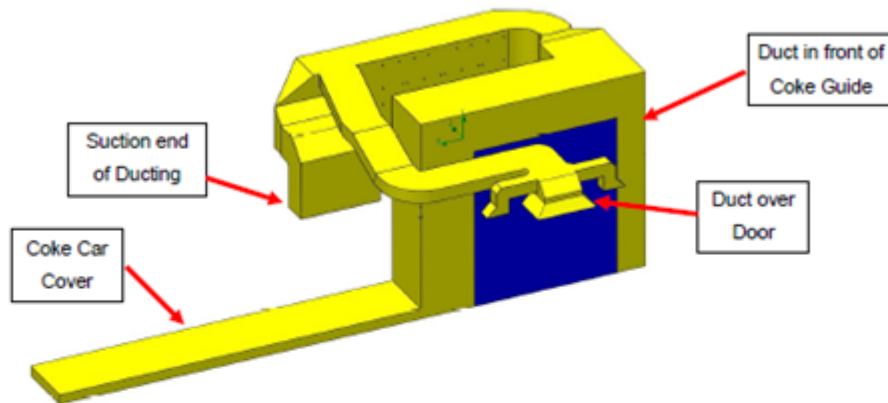


Figure 1 - Isometric of original Guide Hood

1.2 New Proposed Hood

The new proposed guide hood designed by John M Henderson Machines Ltd, shown below, has a different and more efficient air flow design with the aim of capturing more smoke from the coke as it is pushed from the oven and as the coke car travels below the hood.

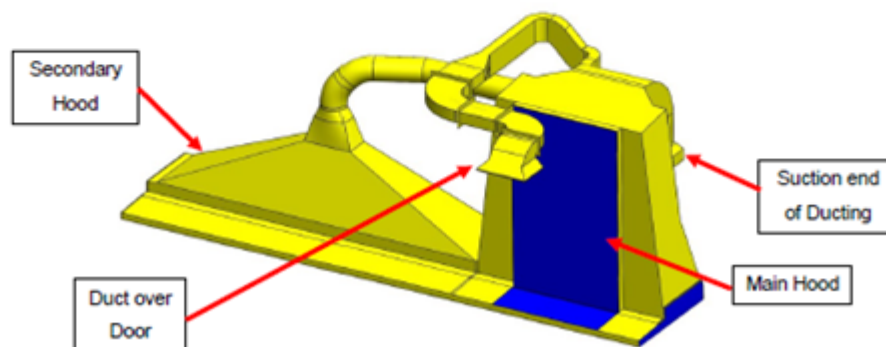


Figure 2 - Henderson's Proposed Hood design

The new system is designed to increase fume capture and suction capability and reduces turbulence within the gas transfer ducting. It is projected to be in service for the remaining operating life of Morfa Coke Ovens (with maintenance).

Hood replacement project update 11/12/2019

Tata Steel's project team provided the following update during this inspection:

- Majority of system components delivered to site and ready to install
- 10/12 of the supporting steel 'bridge' sections are now in place
- Commissioning is estimated to take four weeks once all components are in place (2 weeks 'cold commissioning' followed by 2 weeks testing or 'hot' commissioning)
- Marine-grade painting has been used where possible to protect components, especially considering the exposed coastal location of MCO
- Ducting and pipework has been lined for added protection
- New hood dispenses with the regenerators which contributed to turbulence and constrained the fume extraction capacity of the old system

Much of the metalwork has been fabricated or assembled using local companies, contributing to a

lower overall project carbon footprint.

During our visit we took the opportunity to inspect the coke-side area where the work was taking place, as shown in the photographs below.



MCO coke-side looking north. Note the refurbished steel 'bridge' for the guide car running parallel to the coke oven batteries



MCO's new Minister Stein fume arrestment hood ready for installation



MCO coke-side looking north with new ducting components ready for installation

The project team explained that delays to crane lifts caused by poor weather and high winds had impacted delivery of the project targets since October 2019, and ultimately was preventing reinstatement of coke-side fume arrestment capability according to plan. Three major lifts were still needed at the time of inspection. The delays were evident from the number of components – including the new hood – which had been delivered to site but could not be lifted into place.

The difficulty of conducting safe crane lifts during periods of unsettled weather is recognised, however further delays to this project beyond February 2020 would not be satisfactory from NRW's regulatory perspective. Tata Steel indicated that allowing for completion of the remaining crane lifts, the project was on course to complete by mid-February 2020.

General observations

We noted that the visual appearance of emissions from the both (live) coke oven batteries had improved compared to previous inspections at MCO. No significant visual emissions were observed during our inspection. This matches the improved compliance position for MCO visual emissions (doors, tops, charging) reported since February 2019.

We are concerned about the environmental impact of 'black pushes' from MCO, which can occur in response to carbonisation issues within individual ovens. The Minister Stein system performs a key role in mitigating the impact of black push emissions.

BOS Plant Secondary Fume Extraction Systems

We received an update about Tata Steel's ongoing CAPEX project to maintain and upgrade the BOS Plant secondary fume extraction (FEP) systems. The latest phase of this multi-million-pound project includes:

- Replacement FEP fans and fan motors
- Optimised FEP asset integrity maintenance supported by Tata Group Environment
- Increased emphasis on returning Secondary FEP system to its original design and performance criteria

The main BOS secondary FEP system uses three large fans (4, 5 & 6) to draw fumes and dust from primary steelmaking into a bag filter (abatement) system. The system can provide fume abatement using two fans while one is offline for maintenance or upgrade.

There should be an opportunity to see the upgraded secondary FEP system and other improvements at the BOS Plant from Spring 2020 onwards.

Summary and further actions required

Morfa Coke Ovens coke-side guide and fume arrestment system

During this intervention we inspected the repaired and redesigned system which will reinstate coke-side transfer and fume arrestment capability at MCO. The new system is designed to increase fume capture and suction capability.

Most system components are now on site and ready to install. Tata Steel has encountered delays to crane lifts caused by poor weather and high winds. These delays are impacting the project delivery targets and the reinstatement of fume arrestment. These difficulties are recognised, but further delays to this project beyond February 2020 would not be satisfactory from our regulatory perspective.

Tata Steel indicated that allowing for completion of the remaining crane lifts, the project was on course to complete by mid-February 2020. The operator is expected to provide a further update to the regulator as soon as possible and no later than 07/02/2020. **Action – see section 4 below**

BOS Plant Secondary Fume Extraction Systems

NRW welcomes the update regarding the ongoing BOS Plant Secondary FEP CAPEX project and looks forward to the opportunity to visit the BOS Plant in 2020.

Persons present

Tata Steel	
Claire Grainger	Environment Manager (SHE)
Georgina Brooks	Environmental Engineer (SHE)
Jason Massey	Environmental Engineer (SHE)
Rebecca Jones	Fire & Environment Manager (Slab & Steel)
Wayne Hoffrock	Production Manager (MCO)
Lee Puckey	Development Programme Manager (MCO)
Ryan Lipscombe	Project Engineer (MCO)
NRW	
Douglas Cowie	Senior Officer – Industry Regulation
Liane Bacon-Weekes	Senior Officer – Industry Regulation

[END OF SECTION 2]

EPR Compliance Assessment Report

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Site	Port Talbot Steel Works	Permit Ref	BL7108IM
Operator/Permit holder	Tata Steel UK Limited	Date	11/12/2019

Section 3 – Enforcement Response

You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
B1	X	Operator to provide update regarding the MCO coke-side fume arrestment project by the specified date.	07/02/2020

Section 5 – Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- Advise on corrective actions verbally or in writing
- Require you to take specific actions verbally or in writing
- Issue a notice
- Require you to review your procedures or management system
- Change some of the conditions of your permit
- Decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you

- We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.
- Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and/or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- Ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- Ensure you comply with other legislative provisions which may apply

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance that could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- Offering/providing you with its literature/services relating to environmental matters
- Consulting with the public, public bodies and other organisations (eg. Health and Safety Executive, local authorities) on environmental issues
- Carrying out statistical analysis, research and development on environmental issues
- Providing public register information to enquirers
- Investigating possible breaches of environmental law
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Regulations request

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within fifteen working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.