

POLLUTION PREVENTION AND CONTROL ACT 1999 ENVIRONMENTAL PERMITTING REGULATIONS 2016 (as amended)

Permit Number: 2.3/044925/JT4

Installation Address: Independent Forgings and Alloys Ltd Victoria Forge Livesey Street Sheffield S6 2BL

In accordance with Regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016 (as amended), Independent Forgings and Alloys Ltd is hereby permitted to operate a scheduled activity at the address detailed above, namely the Surface Treatment of Metals (which is likely to result in the release of acidforming oxides of nitrogen into the air) as described in Schedule 1, Part 2, Chapter 2, Section 2.3, Part B, subsection (a) and subject to the following Permit.

Signed

Dated this day: 15th January 2020

Commercial Team Manager Authorised by Sheffield City Council to sign on their behalf The Secretary of States Guidance PG 4/01 "Surface treatment of metals" has provided the framework for the conditions in this permit

Name & Address of Operator:

Independent Forgings and Alloys Ltd Victoria Forge Livesey Street Sheffield S6 2BL

Alternative:

		/ itomativo.	
Contact Name:	Paul Nicholson		
Contact Telephone:	0114 285 8102	Shaun Joseph	(07760) 174207
Mobile Telephone:	07760 174 208		

Registered Office:

Independent Forgings and Alloys Ltd Victoria Forge Livesey Street Sheffield S6 2BL

Address of Permitted Installation:

Independent Forgings and Alloys Ltd Victoria Forge Livesey Street Sheffield S6 2BL

The Regulator

Any communication with Sheffield City Council should be made to the following address quoting the Permit Number: **2.3/044925/JT4**

Environment Protection Service Sheffield City Council 5th Floor (North) Howden House 1 Union Street Sheffield S1 2SH

Tel: 0114 273 4651

Alternatively Email: epsadmin@sheffield.gov.uk

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Explanatory Note to Pollution Prevention and Control Permit for Part B Installations. (This note does not form a part of the Permit)

The following Permit is issued under Regulation 13(1) of the Environmental Permitting (England and Wales) Regulations 2016, as amended ("the EP Regulations") to operate an installation carrying out activities covered by the description in Schedule 1, Part 2, Chapter 2, Section 2.3, Part B, subsection (a) of those Regulations.

SECTION 2.3 Surface treating metals and plastic materials

(a) Any process for the surface treatment of metal which is likely to result in the release into air of any acid-forming oxide of nitrogen and which does not fall within Part A(1) or Part A(2) of this Section.

Process Changes

Under the provisions of the EP Regulations, you are required to notify the Council of any proposed change in operation at least 14 days before making the change. This must be in writing and must contain a full description of the proposed change in operation and the likely consequences. Failure to do so is an offence.

If you consider that a proposed change could result in the breach of the existing permit conditions or is likely to require the variation of permit conditions then you may apply in writing under Regulation 20(1) of the EP Regulations. Additionally, if this involves a SUBSTANTIAL CHANGE to the installation you will be required to submit an application, pay the relevant fee and advertise the application accordingly. You may serve a Notice on the Council requesting that they determine whether any change that is proposed would constitute a substantial change before you proceed with application.

Variations to the Permit

The Permit may be varied in the future by the Council serving a Variation Notice on the Operator. If the Operator wishes any of the Conditions of the Permit to be changed, a formal Application must be submitted.

Surrender of the Permit

Where the operator of a Part B installation or mobile plant ceases or intends to cease the operation of the activity the operator may notify the regulator of the surrender of the whole permit, in any other case, notify the regulator of the surrender of the permit in so far as it authorises the operation of the installation or mobile plant which he/she has ceased or intends to cease operating. The notification shall contain information as described in Regulation 24 or 25 of the EP Regulations.

Transfer of the Permit or Part of the Permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 21 of the EP Regulations. A transfer will be allowed unless Sheffield City Council considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit.

Annual Subsistence Fee

In accordance with Regulation 66 of the EP Regulations, the holder of a permit is required to pay a fee for the subsistence of the Permit. This fee is payable annually on 1st April. You are advised that under the provisions of Regulation 66 (5) of the EP Regulations, if you fail to pay the fee due promptly, Sheffield City Council may revoke the Permit. You will be contacted separately each year in respect to this payment.

Public Register

The Council is required by Regulation 46 of the EP Regulations to maintain a Public Register containing information on all LAPPC installations and mobile plant. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00 am to 5.00 pm) at the following address:

Environmental Protection Service Sheffield City Council 5th Floor (North) Howden House 1 Union Street Sheffield S1 2SH

Tel: 0114 273 4651 or email epsadmin@sheffield.gov.uk

Confidentiality

Sheffield City Council has a duty to consider the question of confidentiality of information supplied to it. If any information supplied is considered confidential, a statement of which information this applies to and the reasons why it is considered confidential should be specified. The Operator is reminded that he may apply to Sheffield City Council for the exclusion of information from the public register under the provisions of the Environmental Permitting (England and Wales) Regulations 2016.

Appeals

Under Regulation 31 of the EP Regulations operators have the right of appeal against the conditions attached to their permit. Schedule 6 of the EP Regulations sets out the detailed procedures.

Appeals against a Variation Notice do not have the effect of suspending the operation of the Notice. Appeals do not have the effect of suspending Permit conditions.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the Notice, which is the subject matter of the appeal.

How to Appeal

There are no forms or charges for appealing. However, for an appeal to be valid, appellants (the person/operator making the appeal) are legally required to provide:

- Written notice of the appeal;
- A statement of the grounds of appeal;
- A statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or a hearing – a hearing must be held if either the appellant or enforcing authority requests this, or if the Planning Inspector or the Secretary of State decides to hold one.
- (Appellants must copy the above three items to the local authority when the appeal is made)
- A copy of any relevant application;
- A copy of any relevant permit;
- A copy of any relevant correspondence between the appellant and the regulator; and
- A copy of any decision or notice, which is the subject matter of the appeal.

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Where to Send Your Appeal Documents

Appeals should be addressed to:

The Planning Inspectorate Environmental Appeals Administration Room 4/19 – Eagle Wing Temple Quay House 2 The Square Temple Quay Bristol BS1 6PN

In the course of an Appeal process the main parties will be informed of procedural steps by the Planning Inspectorate.

To withdraw an appeal the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority.

Enforcement

An **Enforcement Notice** may be served if the Local Authority believes an Operator has contravened, is contravening or is likely to contravene any condition of his Permit.

A **Suspension Notice** may be served if in the opinion of the Local Authority the operation of an installation involves an imminent risk of serious pollution. This applies whether or not the Operator has breached a Permit condition.

The Local Authority can revoke a Permit by written notice at any time by serving a **Revocation Notice**. The Permit then ceases to authorise the operation of the installation.

Offences

A limited summary of the offences is listed below:

- a) operation of an installation without a Permit
- b) failure to comply with or contravene a Permit condition
- c) failure to comply with the requirements of an enforcement or suspension notice

A full list is available under Regulation 38 of the Environmental Permitting (England & Wales) Regulations 2016.

Penalties

The maximum penalties for the above offences are a fine not exceeding £50,000 and/or up to twelve months imprisonment per offence for a summary conviction (in a Magistrates Court); and a fine and/or up to five years imprisonment for conviction on indictment (in a Crown Court).

Description of Activities

The process operated is the surface treatment of metals. The principles of the process are that metal components are treated using chemicals (mainly acids) which clean and treat the surfaces of the metal. The process utilises tanks or vats as they are know where by the metal components are submerged into the treatment liquids. The components undergo rinsing prior to the component being quality checked and satisfactory for use by a customer.

The process is made up of a number of small production lines containing various sets of tanks. The metal components are submerged into each required tank. There are 6 process lines identified as A1 to A7. Process line A2 has been decommissioned.

Emissions of fume from the tanks is extracted and treated by chemical scrubbing abatement plant. A list of key abatement equipment is detailed in schedule 3.

Process Lines

- Process lines A1 to A7 are located at the area indicated by green shading on the plan shown in Schedule 1 to this Permit. The layout of the area is as shown in Schedule 2. Process line A2 has been decommissioned.
- Raw acid storage is in bunded areas, located as indicated in Schedule 2. The maximum storage of acid for use in the process lines is 14 intermediate bulk containers (I.B.C.s).
- Metal components are loaded into a perforated polymer container. The barrel is moved along one of 8 process lines for immersion into tanks of acid and rinse water. Acids are stored in sealed I.B.C.s. Transfer to the dip tanks is by enclosed gravity feed pipes. The process lines are as follows:
- Plant A1 Barrel Etch 1: comprises of 7 tanks, (4 containing acid, 3 for rinse water and a barrel tank). The line is used for surface treatment of titanium and titanium alloy components. These 4 acid tanks each have a volume of 0.62m³.
- Plant A3 Barrel Etch 2: comprises 3 acid tanks (each with a volume of 0.58m³) and 4 rinse tanks. The line is used for surface treatment of nickel alloys.
- Plant A4 Nimonic Polish: comprises of one tank with two compartments. The line is used for etching nimonic alloys.
- Plant A5 Inspection Etch 2: comprises 4 acid and 5 rinse tanks. It is used for the surface treatment of nickel alloys. The acid tanks have a volume of 0.2m³ each.

- Plant A6 Nickel Strip: comprises 2 acid and 2 rinse tanks. It is used for surface treatment of blades. Each acid tank has a volume of 0.4m³.
- Plant A7 Nickel: comprises acid, nickel chloride and water tanks with volumes of 1.28 m³, 2.45 m³ and 1.28 m³ respectively, making a total of 4.91 m³. It is used for the surface treatment of steel, titanium and cobalt-chrome components.

Plant A1 and A3 are fitted with automatic immersion mechanisms incorporating timers. Plants A4 to A6 are operated manually, and A7 has semi-automatic loading. The acid baths contain various mixtures of water, ferric sulphate, hydrofluoric acid, nitric acid, sulphuric acid, hydrochloric acid, nickel chloride and phosphoric acid.

The following Table indicates whether Nitric (HNO3), Hydrochloric (HCI) or Hydrofluoric Acid (HF) are contained in the lines (scrubbers and stacks are as indicated on the plan in Schedule 2):

Line	HNO ₃	HF	HCI	Scrubber	Stack
1	Yes	No	Yes	1	1
3	Yes	Yes	No	1	1
4	No	No	No	No	2
5	Yes	No	Yes	3	4
6	Yes	No	Yes	2	5
7	No	No	Yes	3	4

Temperature is controlled in all etchant tanks with heaters and coolers to maintain required temperatures. The process lines are contained in appropriately constructed bunds. The total volume of acid tanks in lines A1 to A7 (excluding A2 which has been decommissioned) is 3.76 m³.

Waste rinse waters from the processing lines are gravity fed to a recycling plant (located as indicated in Schedule 2). Recovered water is re-circulated into the process and the remaining waste is piped into the acid holding tank. When the holding tank is almost full, the waste acid is pumped into a 20,000 litre holding tank, located as shown on the plan in Schedule 2, prior to removal from site.

The bunded raw acid area is available for containment of hazardous liquids in emergency situations, located as indicated in Schedule 2.

Acid tanks are fitted with lip extraction systems and hood extraction. Process lines A1, A3 and A5 are served by scrubbers, line A4 is served by a demister and eliminator and lines A6 and A7 are served by a scrubber.

Discharge of emissions is to atmosphere via one of 5 stacks. The layout of the extraction, abatement and discharge system is shown on the plan in Schedule 2. A list of key arrestment plant is detailed in schedule 3.

CONDITIONS OF PERMIT.

The following conditions shall be complied with immediately unless otherwise stated.

Section 1 – Overarching Management Conditions

- 1.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.
- 1.2 The best available techniques shall be used to prevent or, where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation of the installation, which is not regulated by any other condition of this Permit.
- 1.3 The activities shall be carried out within the installation boundary indicated by areas of green shading on the plan shown in Schedule 1 to this Permit.
- 1.4 Permitted activities shall only be carried on using the plant and equipment as detailed in the Description of Activities and on the Installation Layout reproduced in Schedule 2 of this Permit.
- 1.5 The Operator shall notify the Regulator of any proposed operational changes including any alterations to the process involving the provision of new plant or equipment which may affect emissions or have consequences for the environment. The information shall be submitted at least 14 days before the changes take place.
- 1.6 No plant or equipment used for any activity shall be operated with an extraction point to atmosphere unless specifically noted within this Permit or specifically agreed in writing with the Regulator.

Section 2 – Upgrading Conditions

2.1 There are no upgrading conditions.

Section 3 - Emission Limits

- 3.1 The concentration of oxides of nitrogen (including Nitric acid vapour), expressed as nitrogen dioxide equivalent, shall not exceed **200 mg/m³** expressed as a 1 hour mean emission concentration.
- 3.2 The concentration of fluoride expressed as hydrogen fluoride shall not exceed **5 mg/m³**.
- 3.3 Emissions to air shall be free of offensive odour beyond the premises boundary as perceived by the regulator.

3.4 No more than 1 tonne of anhydrous HF (hydrogen fluoride) shall be kept at the site at any time.

Section 4 - Monitoring, Sampling and Measurement of Emissions

4.1 Manual extractive emissions monitoring tests for Oxides of Nitrogen and Hydrogen Fluoride shall be carried out at 12 monthly intervals as specified in the Table below, unless otherwise agreed in writing by the Regulator

Stack *	Hydrogen Fluoride	Oxides of Nitrogen
1	Yes	Yes
2	No	No
3	-	-
(stack not now in use)		
4	No	Yes
5	No	Yes

* reference as indicated on the plan in Schedule 2 of this Permit

- 4.2 The operator shall notify the Regulator at least 7 days prior to any periodic monitoring exercise to determine compliance with emission limit values, of provisional dates and times, parameters to be tested and methods to be used.
- 4.3 The results of non-continuous monitoring tests shall be forwarded to the Regulator, within 8 weeks of completion of the testing.
- 4.4 The operator shall keep records of all inspections, tests and monitoring, and visual and olfactory assessments on site for at least 2 years. These records shall be made available to the Regulator on Service upon request.
- 4.5 Monitoring shall be carried out in accordance with methods described in M1 "Sampling requirements for monitoring stack emissions to air from industrial installations" and M2 "Monitoring of stack emissions to air", or by another method agreed in writing by the Regulator.
- 4.6 Adverse results from any monitoring activity shall be investigated by the operator as soon as possible. The investigation shall include the following steps:
 - Identification of the cause of the adverse result and taking corrective action;
 - Recording as much detail as possible regarding the cause and extent of the problem;
 - Re-testing to demonstrate compliance; and
 - Notification to the Regulator within 7 days of receipt of the results.

- 4.7 In any case of abnormal emissions, the operator shall:
 - Identify the cause of the emissions and take corrective action immediately;
 - Adjust the process or activity to minimise the emissions;
 - Record details of the incident describing the nature and extent of the problems, and the remedial actions taken.
- 4.8 The operator shall inform the Regulator without delay in cases where:
 - An emission is likely to have an effect on neighbouring premises; or
 - There is a failure of an arrestment plant listed in Schedule 3 to this Permit.

The report to the Regulator shall include:

- The date and time of the incident;
- The cause and nature of the incident;
- Details of any abnormal emissions;
- Remedial actions taken.
- 4.9 Visual and olfactory assessments of emissions shall be made by the operator upon commissioning a surface treatment bath, and whenever any change is made to the installation process. If coloured or odorous emissions are detected, then these assessments shall be made at least once a day whilst the process is operating. Results of these assessments shall be recorded, including their dates, times and locations. The results shall be made available to the Regulator upon request.
- 4.10 All continuous monitors shall be designed for less than 5% down time over any 3 month period. Maintenance and calibration of monitors shall be done in accordance with manufacturer's recommendations, and details shall be recorded and made available for inspection by the regulator upon request.

Section 5 - Control Techniques

- 5.1 Scrubber liquor pH and flow and exhaust gas pH shall be continuously monitored. The monitors shall be linked to an automatic alkaline dosing system to ensure the lowest concentrations of alkaline scrubbing media and maximum scrubber liquor density during operation, consistent with meeting the emission limits specified in conditions 3.1 and 3.2 of this permit.
- 5.2 The liquor in each scrubber shall be changed at least once in every 26 week period. The time and date of the changes shall be recorded and shall be made available for inspection by the regulator upon request.
- 5.3 An automatic and continuous pH monitoring and dosing system for aqueous alkaline solution shall be installed on the scrubber. The monitors and dosing pumps shall be maintained and calibrated in accordance to the manufacturer's instructions. An alarm shall sound if there is a failure of the monitoring or dosing system or the dosing reagent is at a low level.

- 5.4 Scrubber liquor flows shall be continuously monitored. In the event of a pump failure an audible and visual alarm and stand by pump shall operate. The output readings shall be on display to appropriately trained operating staff.
- 5.5 A list of alarm events shall be maintained. This shall be compiled from weekly report data and updated at least weekly. The list shall include times and dates of alarm events, their causes and remedies implemented.
- 5.6 The scrubber system shall be visually inspected at least once a week. The inspection shall include the following checks:
 - Spray heads are fully and evenly spraying;
 - No blockages are inhibiting liquor circulation;
 - Seals are not perishing;
 - Mist eliminator is intact and in place;
 - No caustic crystallisation or fouling is occurring in the liquor.
- 5.7 The results of these inspections in condition 5.6 shall be recorded, including the times and dates, and shall be made available to the regulator for inspection upon request.
- 5.8 Stacks and ductwork shall be maintained in a leak proof condition and shall be adequately insulated to prevent exhaust gas temperature falling below the dew point.
- 5.9 The accumulation of materials in flues and ductwork shall not be permitted.
- 5.10 The introduction of dilution air into duct systems in order to comply with emissions limits shall not be permitted.
- 5.11 Stacks shall not be fitted with any restriction at the termination, with the exception of a cone which increases the exit velocity.
- 5.12 Spares and consumables subject to continual wear shall be held on site or shall be available at short notice from guaranteed suppliers.
- 5.13 The operator shall notify the Regulator of any proposed changes to dip tank contents that may affect the nature of the substances likely to be discharged from the stacks at least 7 days prior to the change being implemented.
- 5.14 Rim extraction systems fitted to the dip lines shall be used whenever material is being processed. The extracted emissions shall be exhausted through the stacks via the abatement systems.
- 5.15 Variable speed motors shall be utilised where appropriate or possible on the extraction system to reduce energy usage when the process lines are not in operation.

- 5.16 All spillages shall be cleared up as soon as possible; solids by vacuum cleaning, wet methods or other appropriate techniques. Dry sweeping of dusty spillages shall not be permitted in circumstances where it may result in the generation of airborne dust outside the installation building. Liquid spillage shall be cleaned by addition of an absorbent material or by run-off to a contained drainage system.
- 5.17 Spill kits shall be deployed around the site at specific key points so to be able to deal with any spillages safely, quickly and effectively.
- 5.18 Areas where acid is stored shall be bunded. Bunding shall be impervious and resistant to the substances in storage. Bunds shall have a capacity of 110% of the capacity of the largest storage tank within them.
- 5.19 Any IBC's being used in the process, shall be located within a spill containment curb or placed on a purpose spill containment stand.
- 5.20 The height of all stacks serving lines A1 to A7 shall be 17 metres.
- 5.21 Waste gases emitted from the stacks serving lines A1 to A6 shall have minimum exit velocities as follows:

Stack 1: 9.3 m/sStack 2: 6.0 m/sStack 3: 9.2 m/s (Not in use monitoring not required unless equipment reinstated)Stack 4: 9.5 m/sStack 5: 7.6 m/s

Stacks shall be located as indicated on the plan in Schedule 2.

- 5.22 All heated tanks shall be kept at an optimised temperature to ensure there is no excessive emission of vapour or fume.
- 5.23 The temperature of acid in process tanks shall be continuously monitored and automatically maintained as indicated on the plan in Schedule 2 of this Permit. These monitors shall be fitted with audible and visual alarms to indicate when the tolerance is exceeded. The alarms shall trigger a shutdown of the heaters, and barrels shall be automatically removed from tanks in lines fitted with automatic immersion systems.

Operators shall remove workpieces from tanks in lines not fitted with automatic systems in such a way as to minimise any fugitive emissions.

- 5.24 Where appropriate and possible tanks shall be fitted with lids when surface treatment is not being undertaken. The lids shall minimise the potential for evaporation and emissions.
- 5.25 A spare tank shall be located next to the surface treatment lines, within the bunded curb area to deal with any emergencies where a tank contents require removal such as in a potential leak situation.

- 5.26 Written procedures shall be available to operatives with the responsibility of filling tanks so to ensure that no overfill situation occurs and minimise the risk of spillages.
- 5.27 Tanks containing Hydrofluoric, Hydrochloric or Nitric Acid shall be clearly labelled.
- 5.28 The operator shall implement and maintain a procedure on the computerised SHIRE management system for dealing with failures of key abatement plant. The procedure shall be made available to the Regulator upon request.

Section 6 – General Conditions

- 6.1 The operator shall carry out preventative maintenance on all plant, buildings and equipment concerning the control of emissions to air in accordance with the SHIRE computerised maintenance programme.
- 6.2 Essential spares and consumables for abatement plant (especially those subject to continual wear) shall either be held on site or available at short notice from suppliers in order to rectify any breakdowns and ensure the effective and efficient operation of the spraying process.
- 6.3 A high standard of housekeeping shall be maintained.
- 6.4 Records and programmes of maintenance shall be kept by the operator and made available for inspection by the Regulator upon request.
- 6.5 Staff at all levels shall receive training and instructions necessary for their duties and shall include the following:
 - Responsibilities under the permit;
 - SHIRE computerised maintenance system;
 - Minimisation of emissions at start up and shut down;
 - Actions during abnormal emissions including minimisation of emissions.
- 6.6 The operator shall keep and maintain a statement of training requirements for each operational post and keep a record of the training received by each employee whose actions may have an impact on emissions to atmosphere. These documents shall be made available to the Regulator upon request.
- 6.7 The installation shall be supervised by suitably trained personnel that are fully conversant with the requirements of this Permit.

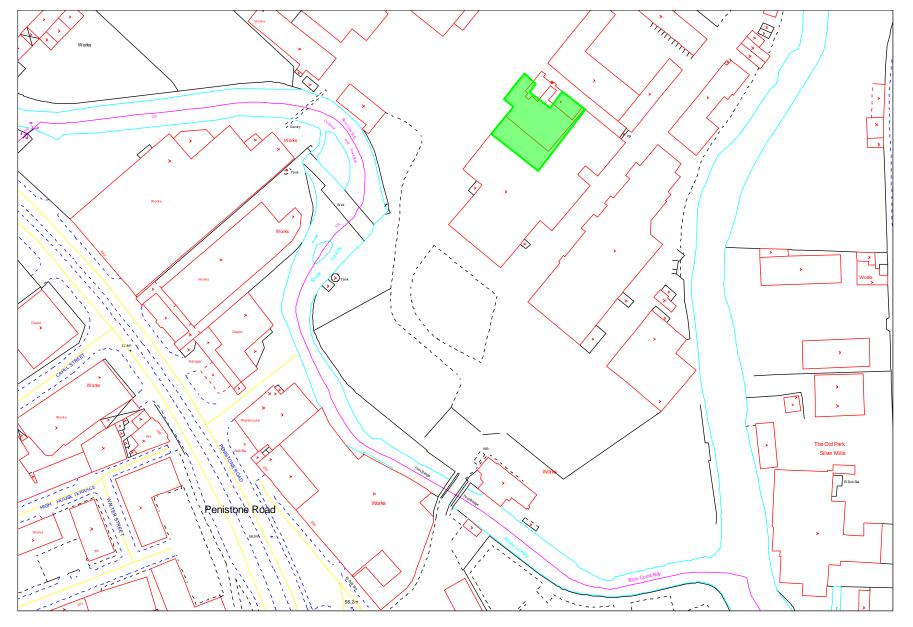
- 6.8 Appropriate staff shall receive formal training and instruction in their duties relating to control of the activity and emissions to air. The training shall include:-
 - Awareness of responsibilities under the Environmental Permit;
 - Minimising emissions on start-up and shut-down; and operation of abatement plant
 - Minimising emissions during abnormal conditions;
 - Minimising emissions from the storage and handling of products used in the process.
- 6.9 A copy of this Permit shall be kept on the premises.
- 6.10 The process shall operate and adhere to the provisions of an appropriate Environmental Management System.
- 6.11 A responsible person shall be nominated to act on behalf of the company, who will be responsible for ensuring that tests, emission monitoring and maintenance measures that are required under this Permit are carried out. The responsible person shall be named in the logbook.
- 6.12 Complete and immediate access to the premises shall be granted to the Regulator upon request.
- 6.13 The Operator shall give written notification to the Regulator in the following instances:
 - a) Permanent cessation of the operation of any part of, or all of the Permitted Installation;
 - b) Cessation of the operation of any part of, or all of the Permitted Installation for a period, likely to exceed 1 year;
 - c) Any proposed change in the operation of the installation; and
 - d) Resumption of the operation of any part of, or all of the Permitted Installation after a cessation notified under (b) above.
- 6.14 The Operator shall notify the following matters to the Regulator in writing, within 14 days of their occurrence:
 - a) Any change in the trading name, registered name or registered office address of the business;
 - b) A change to any particulars of any ultimate holding company, including details of an ultimate holding company where Independent Forgings & Alloys Ltd has become a subsidiary;
 - c) Any steps taken with a view to the company/operator going into administration, entering into a company voluntary arrangement or being wound up.

6.15 All reports and notifications required by this Permit, or under any Regulation under the Environmental Permitting Regulations 2016, shall be sent to Sheffield City Council's Environmental Protection Service. Unless notified in writing, all reports, notifications and communications in respect of this Permit shall be sent to:

Sheffield City Council, Environmental Protection Service 5th Floor (North) Howden House 1 Union Street Sheffield S1 2SH

Tel: 0114 273 4651

Email: epsadmin@sheffield.gov.uk



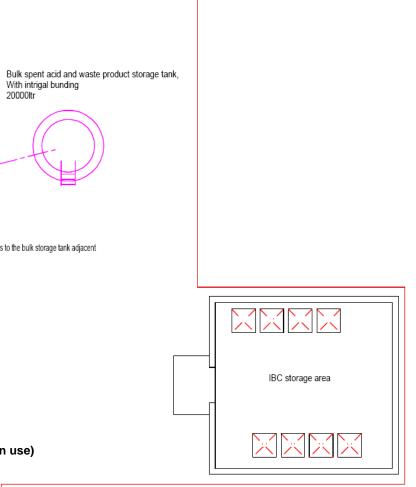


Acid storage area \sim $\overline{\ }$ \times \geq **Process Lines** A1 – Barrel Etch1 A2 – Inspection Etch 2 (Decommis A3 – Barrell Etch 2 A4 – Nimonic Polish A5 – Inspection Etch A6 – Nickle Strip A7 - Nickle Plating Tank filling Acid IBC Storage Tank filling Acid IBC Storage Scrubber Control Panel \sum \sim 1 \sim Scubber 3 A W A W A W Scrubber 2 A5 Õ A6 Waste Acid IBC Storage A7 Spent acid and waste water, Pump across to the bulk storage tank adjacent X a RWP New acid IBC storage area A3 E A1 A4 -Stack 5 Stack 4 Nev Stack 3 (Not in use) Acid Stack 2 A Stack 1 IBC Storage Scrubber 1 Decommissioned Tanks A2 -

Schedule 2 – Installation Layout

Acid Tank Temps

	43
issioned)	
	40
	40-45
	50
	65
	46-56



Schedule 3 – Key Arrestment Plant

Plant Ref	Plant Name	Plasticraft Plant Item Number	IFA Plant Serial Number	Location	Supplier	Capacity (cubic foot per minute)
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Fan No 1	61066 & 61063	External Fan Platform	Ketville Ltd	10,000
A4	Nimonic Electropolish	Fan No 2	61065	External Fan Platform	Ketville Ltd	3,000
A2 (not in use)	Inspection Etch (Line Decommissioned)	Fan No 3	61021	External Fan Platform	Ketville Ltd	3,500
A5	Nickel Inspection Etch	Fan No 4	61027	External Fan Platform	Ketville Ltd	6,000
A6	Nickel Strip	Fan No 5	61025	External Fan Platform	Ketville Ltd	6,500
A1	Titanium Barrel Etch	Scrubber No1	61066 & 61063	Feed Fan No1	Ketville Ltd	10,000
A6	Nickel Strip	Scrubber No 2	61025	Feed Fan No 5	Ketville Ltd	6,500
A5	Nickel Inspection Etch	Scrubber No 3	61027	Feed Fan No 4	Ketville Ltd	6,500
A4	Nimonic Electropolish	Eliminator No 1	61065	Feed Fan No 2 - On Internal platform	Ketville Ltd	3,000
A2 (not in use)	Inspection Etch (Line Decommissioned)	Eliminator No 2	61021	Feed Fan No 3 - On Internal Platform	Ketville Ltd	3,500
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Demister No 1	61066 & 61063	External Fan Platform	Ketville Ltd	10,000
A4	Nimonic Electropolish	Demister No 2	61025	External Platform Between Scrubber No 2/Fan No 5	Ketville Ltd	6,500
A5	Nickel Inspection Etch	Demister No 3	61027	External Platform Between Scrubber No 3/Fan No 4	Ketville Ltd	6,500
A7	Nickel Plate	Scrubber No. 2	61027	Feed Fan No 3	Ketville Ltd	6,500
A1 & A3	Titanium Barrel Etch & Nickel Inspection Etch	Liquor Pump	0001	External platform side of scrubber	Ketville Ltd	

Plant Ref	Plant Name	Plasticraft Plant Item Number	IFA Plant Serial Number	Location	Supplier	Capacity (cubic foot per minute)
A 5	Nickel Inspection Etch	Liquor Pump	0002	External platform side of scrubber	Ketville Ltd	
A 6	Nickel Strip	Liquor Pump	0003	External platform side of scrubber	Ketville Ltd	

Stacks

Details of which lines are served by which stacks are provided in the table below:

Stack 1	A1, A3
Stack 2	A4
Stack 3	A2 (No Longer in use)
Stack 4	A5
Stack 5	A6, A7