



Procedure for Operation & Maintenance of Tumble Dryers

AZSPU-HSSE-DOC-00258-2

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Scope:	AzSPU	Document Administrator:	MS Document Coordinator
Issue Date:	07 October 2008	Issuing Dept:	Safety & Compliance Systems
Revision Date:	10 December 2010	Control Tier:	2
Next Review Date:	17 March 2011		

Control Tier: <<2>>

Document Number: << AZSPU-HSSE-DOC-00258-2 >>

Revision Date: 10 December 2010

Print Date: 2/1/2011

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TABLE OF CONTENTS

1	PURPOSE / SCOPE	3
1.1	INTRODUCTION	3
1.2	PURPOSE	3
1.3	SCOPE	3
2	DEFINITIONS	3
3	GENERAL REQUIREMENTS	4
3.1	LEGISLATION & STANDARDS	4
3.2	COMPANY REQUIREMENTS	4
3.3	STOPPING UNSAFE WORK	4
3.4	DEVIATIONS.....	4
4	RESPONSIBILITIES	5
4.1	SITE MANAGER (SM) / SITE CONTROLLER (SC) / OFFSHORE INSTALLATION MANAGER (OIM)5	
4.2	MAINTENANCE TEAM LEADER	5
4.3	CATERING CONTRACTOR CAMP BOSS.....	5
4.4	LAUNDRY STEWARDS OPERATING THE TUMBLE DRYER	6
4.5	VENDOR REPRESENTATIVE MAINTAINING THE TUMBLE DRYER.....	6
5	TUMBLE DRYER OPERATION	6
5.1	MAIN CAUSES OF TUMBLE DRYER MALFUNCTION AND INCIDENTS	6
5.2	OPERATING PROCEDURE	7
5.3	PRECAUTIONS TO BE TAKEN DURING TUMBLE DRYER OPERATION	8
5.4	INSPECTION AND MAINTENANCE OF TUMBLE DRYER	8
5.5	EMERGENCY ACTIONS	9
5.6	APPENDICES	9
6	KEY DOCUMENTS REFERENCES	9

1 PURPOSE / SCOPE

1.1 INTRODUCTION

Washing and drying of clothes is an important part of catering services provided to BP employees and contractors in order to maintain high standards of hygiene. Use of washing and drying equipment introduces specific hazards to the onshore site or offshore installation, such as fire, exposure to chemicals, manual handling etc. The fire hazard due to its nature and potential consequences is considered as the most significant hazard.

Use of tumble dryers can introduce a fire hazard and therefore, it should be properly operated and maintained.

1.2 PURPOSE

The purpose of this Safe System of Work is to provide information and guidance on the safe use and maintenance of tumble dryer as a most hazardous part of laundry equipment for washing and drying of clothes on BP operated offshore installations and onshore sites.

Information is provided on individual responsibilities, risk assessment, generic tumble dryer operating procedure, and the maintenance and inspection of associated equipment.

1.3 SCOPE

The contents of this procedure are applicable to all BP owned and managed sites / installations in Azerbaijan and Georgia. Contractors working on BP owned or managed sites / installations are also responsible for alignment with this procedure.

This document does not replace the procedures prepared and adopted by specialist contractors. Neither does it supersede any national and local regulatory requirements.

- Operating Management System OMS Essentials 3.2(3.2.1) and 4.5(4.5.1)

All guidelines contained shall be regarded as the minimum requirements for BP owned or managed sites / installations in Azerbaijan and Georgia.

2 DEFINITIONS

Refer to document [AzSPU-HSSE-DOC-00021-2](#) HSE Definitions for definitions common to this Procedure. Definitions specific to the Procedure are included below.

SM	Site Manager
SC	Site Controller
OIM	Offshore Installation Manager
MTL	Maintenance Team Leader
Camp Boss	Site/Installation Catering Manager
ALARP	As Low as Reasonably Practicable
COW	Control of Work

Control Tier: <<2>>

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PTW	Permit to Work
SSOW	Safe System of Work
gHSEr	Getting HSE Right
PSA	Production Sharing Agreement
AzSPU	Azerbaijan Strategic Performance Unit

3 GENERAL REQUIREMENTS

3.1 LEGISLATION & STANDARDS

This procedure complies with applicable national law. Applicable national law is national law as amended by project specific agreements, e.g. the ACG Production Sharing Agreement (PSA), and relevant International Conventions, if any, in force in Azerbaijan or Georgia, as applicable.

In the absence of national legislation, or where national legislation is inconsistent with the requirements of project specific agreements, BP Group Standards or applicable requirements from UK or US legislation will be complied with.

Where requirements conflict, legal advice has been obtained and a defensible compliance position adopted.

The standards and practices contained in this procedure are consistent with those internationally recognized within the petroleum industry.

3.2 COMPANY REQUIREMENTS

It is a company requirement that all tasks are subjected to an assessment of risk to demonstrate that risks have been reduced to ALARP level. This can be achieved by complying with the Company's, Contractor's and Manufacturer's existing standards and procedures. Where compliance with Company standards cannot reasonably be achieved, a formal level 2 Risk Assessment will be undertaken to identify any additional controls and demonstrate that risks remain ALARP.

3.3 STOPPING UNSAFE WORK

To stop the continuation of potentially unsafe work at the earliest possible stage, the Control of Work (CoW) Policy and this procedure for use of laundry equipment make it very clear that all personnel are obliged and have the authority to **"STOP"** the work that they consider to be unsafe.

3.4 DEVIATIONS

This procedure is written in sufficient detail that it should be able to be applied consistently at all sites / installations. There may still be the requirement for some local rules covering site / installation specific logistical/administrative arrangements and local variations in responsibilities to reflect differences in organisational arrangements. These local rules should not deviate from the core processes within this document. Any form of deviation from this procedure, including but not limited to local rules, shall be requested and authorised in accordance with SSOW, Procedure for Deviations (Doc. No: [AZSPU-HSSE-DOC-00011-2](#)).

4 RESPONSIBILITIES

4.1 SITE MANAGER (SM) / SITE CONTROLLER (SC) / OFFSHORE INSTALLATION MANAGER (OIM)

The SM/SC/OIM shall be responsible and accountable for the application of this procedure in his area of responsibility. He shall ensure that:

- Adequate numbers of competent responsible persons are appointed to manage and maintain the requirements of this procedure
- The maintenance of tumble dryer is controlled under the Permit to work system and site / installation specific procedure
 - This procedure is strictly adhered to for all occasions when tumble dryer operation and maintenance activities are to take place.
 - Tumble dryer operation and maintenance is subjected to a Risk Assessment and RA is periodically reviewed

4.2 MAINTENANCE TEAM LEADER

MTL supervising tumble dryer maintenance activities by Vendor representative(s) is responsible for ensuring:

- The safety of all personnel involved in the activity
- That all personnel involved in the operation have been properly briefed on their roles and responsibilities and their required response in an emergency
- That the operation & maintenance of tumble dryers has been risk assessed and properly planned
- That the workers involved in operation and maintenance of tumble dryers are properly trained and certified
- That the maintenance of tumble dryer is carried out according to Maximo Job Orders and recorded accordingly.
- That the tumble dryer is regularly inspected and maintained and has all relevant up-to-date certification
- Ensuring that CoW standard is fully followed, all isolations are proved and Permit to Work (PTW) is issued
- That the training records are maintained and updated.

4.3 CATERING CONTRACTOR CAMP BOSS

Catering Contractor Camp Boss is responsible for ensuring that:

- Catering workforce dealing with tumble dryer is trained and competent to operate the equipment
- Catering Contractor carried out Risk Assessment covering the operation of tumble dryer and outcomes are communicated to all laundry stewards dealing with operation of tumble dryers. The Risk Assessment should be recorded and be accessible to the workforce.
- Laundry stewards have a full understanding of their roles and responsibilities

Control Tier: <<2>>

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of tumble dryer operation

- He/she is involved in the review process of this procedure

4.4 LAUNDRY STEWARDS OPERATING THE TUMBLE DRYER

Laundry Stewards responsible for providing washing and drying services for BP operated sites/installations, and particularly those working with tumble dryers are responsible for:

- Observing absolute care and safety at all times during tumble dryer operations
- Strictly following the tumble dryer operating procedures
- Ensuring that all overalls are checked against possible tools/equipment forgotten in the pockets of the workers' overalls. It is recommended that the all personnel should be asked to turn overall pockets inside out, before leaving their work gear in the laundry
- Checking and cleaning all filters in the tumble dryer and extraction units within the laundry area throughout the shift with frequency recommended by vendor with daily records kept
- Cleaning the fluff gathering on the inside wall of the body of the tumble dryer during the maintenance activities
- Halting operations and informing the supervisor whenever they consider the activity is unsafe or likely to become unsafe
- Ensuring that they have a full understanding of emergency procedures in case of fire in the laundry room.

4.5 VENDOR REPRESENTATIVE MAINTAINING THE TUMBLE DRYER

Vendor representative(s) involved in the maintenance of tumble dryer is responsible for¹:

- Ensuring that they have a full understanding of their roles and responsibilities of tumble dryer maintenance
- Carrying out the maintenance of tumble dryer in accordance with Maximo Job Orders and manufacturer's recommendations
- Participating in the Risk Assessment for tumble dryer maintenance activities, making sure that Vendor personnel is familiar with the contents
- Ensuring that all Vendor personnel is properly trained and certified.

5 TUMBLE DRYER OPERATION

5.1 MAIN CAUSES OF TUMBLE DRYER MALFUNCTION AND INCIDENTS

There are the following main causes of malfunction or incidents including

¹ On Chirag offshore installation, the platform maintenance team is responsible for the maintenance of the tumble dryers.

spontaneous combustion during the operation of tumble dryer:

1. Equipment failure – usually the elements, drum or wiring - either due to incorrect maintenance or no maintenance at all
2. The extracts are not cleaned regularly and the built up of lint /fluff can ignite either inside the filter or in the ducting extract. There are two levels of cleaning –the first to be carried out by the catering team and consists of the internal filter within the tumble dryer being cleaned minimum once per day; the second is the actual ducting going from the dryer into the HVAC ventilation; this is managed by the HVAC engineer onboard and should be part of the regular PMR's
3. Lack of following the correct procedure. There is a risk of spontaneous combustion if the items are not allowed to follow the correct cooling cycle once they are dried
4. Tools such as screwdrivers or Allen keys etc., have accidentally been left in the coveralls.

5.2 OPERATING PROCEDURE

Catering Contractor operating the tumble dryer should follow BP HSE COW requirements and its own procedure/method statement on operating tumble dryer.

The procedure should take into account of at least the following issues:

- Adherence to specific manufacturer's instructions
- Specific guidance on clothing that may and may not be dried
- Overloading
- Unloading (storage, e.g. no stacking or packing potential for heat build up after removal from dryer)
- Potential for static electricity build up and discharge
- Use of suitable laundry baskets (non conducting e.g. plastic)
- Use of full cooling cycle
- Actions on power failure
- Monitoring (attendance)
- Filter cleaning
- Emergency Procedures

The following step-by-step procedure should be strictly adhered in order to maintain adequate standards of safety and reduce the potential for accidents, including fires:

1. Fill garments into the drum ensuring that they have been loaded loosely
2. Select program:
 - a. P A – COTTONS. Select between 1 to 6 programs. The machine stops automatically.
 - b. P B – MINIMUM IRON. Select between 7 to 9 programs. The machine stops automatically.
 - c. P C – TIMED DRYING. Select program 10 or 11. The machine stops automatically
3. Press the start / stop button
4. To stop, press the start / stop button or open the door
5. To restart close the door and press the start / stop button
6. The last minutes of the drying time are the cooling down period (cooling of the

- garments)
7. To prevent creasing, empty the tumble dryer as soon as the program has ended
 8. If the dryer is not emptied just after the drying time has ended, an anti-crease program is automatically engaged. This means that the drum rotates at short intervals, thereby almost completely avoiding creasing
 9. Always clean the filter after each load by opening the door and pulling up the filter housed in the inside of the door
 10. The outside of the dryer should be cleaned with a damp cloth.

The laundry steward will switch off all tumble dryer machines in accordance with manufacturer specifications, and will ensure that all finished laundry work has been stowed and /or placed in the appropriate collection area. Any work in progress should be neatly placed and put to one side for the next shift to complete.

All waste material will be disposed of as per installation procedures.

The outside of all tumble dryers should be wiped down.

The laundry door should be mopped and dried, ensuring that the correct warning signage has been put in place before the commencement of this task.

The laundry steward will brief on-coming shift of work in-progress, equipment defects and any special requirements outstanding.

5.3 PRECAUTIONS TO BE TAKEN DURING TUMBLE DRYER OPERATION

To avoid fire hazards, including spontaneous combustion, the following actions should be avoided:

1. Do not dry articles containing foam rubber or similarly textured rubber-like materials or material that has cleaning solvent present, or which contains flammable liquids or solids
2. Kitchen overalls, rags, cloths or scrubs which may be greasy, fatty or impregnated with other materials should not be dried
3. Do not dry mops, floor cloths etc in the tumble drier. These items may contain wax or cleaning agents that can cause spontaneous combustion
4. Dry only articles that have been cleaned in water (in the washing machine)
5. Never remove the washing from the machine before the drying programme has finished. To allow the cooling down phase to be completed
6. Laundry items cannot be stacked or packed. These items should be removed to perforated laundry baskets
7. Padded or filled fabrics (e.g. jackets or cushions) should not be dried
8. Be sure to clean the lint filter after each load
9. The dryer produces combustible lint. The area around the dryer should be kept clean and free of lint
10. Never allow unauthorised or untrained personnel to operate the tumble dryer
11. Any electrical faults should be reported immediately to the Camp Boss or qualified person.

5.4 INSPECTION AND MAINTENANCE OF TUMBLE DRYER

Inspection and maintenance of tumble dryers must be carried out in accordance with COW requirements, Vendor's maintenance procedures and Maximo Work Orders.

Due to difference in types of tumble dryers used on sites and installations across the AzSPU it is not possible to provide a unified detailed maintenance procedure in this SSOW.

5.5 EMERGENCY ACTIONS

If anybody discovers a fire in the laundry, he should raise the alarm. After that the site's / platform's general emergency procedure is activated.

5.6 APPENDICES

Appendix A: DUQ One Pager Report



Lessons Learned
One Pager .doc

Appendix B: Clothes Dryer Fire Safety (GoM) presentation



Clothes Dryer Fire
Safety.ppt

Appendix C: Generic Method Statement on Use & Cleaning of Tumble Dryers



Laundry
procedures.doc

Appendix D: Example of manufacturer's safety instructions



Meile Safety
Instructions.doc

6 KEY DOCUMENTS REFERENCES

This procedure shall, where appropriate, be used in conjunction with this suite of AzSPU Procedures referenced below.

Control Tier: <<2>>

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Document Number	Title of Procedure
AZSPU-HSSE-DOC-00011-2	Procedure for Deviations from Regulations and Procedures
AZSPU-HSSE-DOC-00060-2	Procedure for Permit To Work
AZSPU-HSSE-DOC-00063-2	Procedure for Task Risk Assessment
AzSPU-HSSE-DOC-00021-2	HSE Definitions
AZSPU-HSSE-DOC-00002-2	Procedure for Control of Work

Review/Revision Log

Revision Date	Authority	Custodian	Revision Details
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07 October 2008	Alan McNulty Central H&S Manager	Central Safety TL	Initial Issue
05 December 2008	Yuliy Zaytsev AzSPU Safety & Compliance Systems Manager	Adalat Mamedov Central Safety TL	Authority position/name and custodian name have changed to reflect org changes in HSE&TD as of December 1st 2008
17 September 2009	Yuliy Zaytsev AzSPU Safety & Compliance Systems Manager	Niyaz Mamedov HSE Systems / CoW Adviser	The bullet was removed from Paragraph 4.5, Vendor Representative Maintaining Tumble Dryer, to the Paragraph 4.2, Maintenance Team Leader. Paragraph 5.5, Emergency Actions, is reworded. The numbering of the Procedure is totally changed in accordance with Standardized Document Control Procedure Template requirements.
10 December 2010	Yuliy Zaytsev AzSPU Health & Safety Manager	Elman Shikhkerimov CoW/Safety Systems Lead	Section 1 Purpose and Scope Removed reference to Getting HSE right and replaced with OMS, Group requirements