

Procurement Quality Assurance Certification Requirement

QC Procedure
SWP-QC-2506

Document Approval

Author: J. Dargie

Approved by: A. Love

Document revision and amendment record		
Rev N°	Date:	Brief Description of Review or Change:
05	10/04/2012	Changed in line with new regulations SWQ1 now Declaration of Compliance.
06	03/10/2012	Addition to Certificate of Heat Treatment SWQ21
07	11/10/2012	Addition to Certificate of Pressure Test SWQ11
08	29/01/2013	Addition to SWQ2 Packing of Goods as per AL
09	09/07/2013	Revised to update some administration spelling.
10	22/10/2013	Additional requirements added to SWQ28 JD
11	06/02/2014	Admin Changes
12	18/07/2014	Changes to SWQ04 as per Quality Meeting
13	17/07/2015	Changes to SWQ08
14	22/12/2015	Additional requirements added to SWQ12 & SWQ13
15	12/04/2016	Additional requirements added to SWQ28
16	05/05/2016	Minor wording change in SWQ28
17	02/06/2016	Note added to SWQ09
18	13/09/2016	SWQ03 amended

STANDARD QUALITY ASSURANCE REQUIREMENTS

CONTENTS

SWQ01	Declaration of Compliance BS EN 10204, 2.1	3
SWQ02	Manufacturers Identification/Part Number.....	3
SWQ03	Packaging of Goods.....	3
SWQ04	Detailed Inspection Report	3
SWQ05	EU Conformity Assessment.....	4
SWQ06	Pressure Equipment Directive (EU DIRECTIVE 97/23/EC)	4
SWQ07	Certificate Of Non-destructive Test (NDT)	5
SWQ08	Material Certificates EN 10204 - 3.1.....	5
SWQ09	Certificate Of Load Test	6
SWQ10	Fabrication Certification.....	7
SWQ11	Certificate Of Pressure Test.....	7
SWQ12	Certificate Of Dynamic Balance.....	7
SWQ13	Certificate Of Suppliers Works Function Test	7
SWQ14	Type Test Report (Electric Motors)	7
SWQ15	Routine Test Report (Electric Motors)	8
SWQ16	Performance Test Report.....	8
SWQ17	Certification for Equipment for use In Potentially Explosive Atmospheres	8
SWQ18	Statement of Cure Date	8
SWQ19	Calibration/Test Report.....	9
SWQ20	Certificate Of Cleanliness EN 10204-2.2	9
SWQ21	Certificate Of Heat Treatment	9
SWQ22	Certificate Of Survey	10
SWQ23	Hazardous Substance Instructions.....	10
SWQ24	Site Report	10
SWQ25	Weight Certificate.....	10
SWQ26	Documentation Package.....	11
SWQ27	Painting Report.....	11
SWQ28	Submersible Electric Motors & Pumps (Repair or replacement)	11

SWQ01 Declaration of Compliance BS EN 10204, 2.1

A Declaration of Compliance shall accompany each consignment of goods supplied against this purchase order.

The following are our minimum requirements where applicable:-

- a) Sulzer Wood Purchase Order number and line item numbers.
- b) Description of goods / part number / specification.
- c) Quantity covered by the certificate.
- d) Hazardous area certificate / licence number (if applicable).
- e) Statement to the effect that items are designed, manufactured & inspected in accordance with the purchase order / drawing requirements.
- f) Details of any deviation agreed by Sulzer Wood via a formal concession number.

Note: The declaration shall not include any test results.

SWQ02 Manufacturers Identification/Part Number

All goods supplied against this purchase order shall be marked in such a manner as to provide adequate identification and traceability as described in the categories below:

All goods supplied against this order shall carry the manufacturer's identity and part number.

In the event of ID and part number not being applicable i.e. proprietary items, Sulzer Wood Ltd requirements will be covered by ensuring:

- a) Container/package consignment is clearly labelled with items specific Identification with Sulzer Wood Ltd Part Drawing/Purchase Specification Number.
- b) Relevant documents including Advice Notes and Invoices correctly record the assigned identification requirements i.e. Part Numbers, Quantity and Description.

SWQ03 Packaging of Goods

1. Container/packages containing items shall be clearly labelled with items specific identification with Sulzer Wood Ltd Part Drawing/Specification Number. Consignments of smaller items shall be suitably segregated, packed, bagged and tagged.
2. All packaging shall be suitable for purpose especially heavy or awkward loads and all loads shall be secured within the packaging.
3. All equipment which cannot be manually handled but which requires lifting by means of mechanical aids, shall be supplied with a suitable means of lifting and shall be clearly marked with the equipment weight and instructions for safe lifting including the ability to lift using a forklift and overhead crane.
4. All packaging must comply with the UK Oil & Gas guidelines and must not contain polystyrene chips, polystyrene sheeting, shredded paper or shredded cardboard. Failure to comply with this may result in a disposal handling fee.
5. Special boxes/containers and their lifting equipment must be load tested suitable for offshore usage unless otherwise stated.
6. Hazardous or dangerous goods must be identified and packed in line with the current regulations.
7. All goods shall be suitably preserved in accordance with Sulzer Wood Procedure "Preservation and Packing".

SWQ04 Detailed Inspection Report

All goods supplied against this order shall be accompanied by a 'Detailed Inspection Report' and detailing the following minimum requirements:

- a) Sulzer Wood Ltd Ref No.
- b) Equipment Manufacturer, Model/Type and Serial No.
- c) Itemised inspection report detailing as received condition of component parts.
- d) As Received Condition of Main Components.
- e) Actions Required to Repair the Parts.
- f) Signature of Operator and Date of Assessment.
- g) State Mode of Failure if known.

SWQ05 EU Conformity Assessment (EU Directives relating to Product Safety and CE Marking)

All goods within the scope of this purchase order shall satisfy the Essential Health and Safety Requirements (ESR's) contained within applicable EU Directives relating to Product Safety and CE Marking. Accordingly:

- a) On delivery of goods, the supplier shall provide Sulzer Wood Ltd with a 'Declaration of Conformity' or 'Declaration of Incorporation' as required by those directives, depending upon the function of those goods.
- b) Where the goods are themselves the subject of such a declaration or, where they constitute components destined for incorporation into machinery which, will in turn be subject to a declaration by Sulzer Wood Ltd, the supplier shall compile and maintain a technical file containing such information as is necessary to demonstrate the suppliers assessment of risk and conformity with appropriate directive(s) and Essential Safety Requirements contained within the Directive(s).
- c) Sulzer Wood Ltd reserves the right to verify technical files at any time during and after the contracted period of supply.
In the event of any investigation and/or claim by a third party relating to safety of the goods or machinery into which they were incorporated, the supplier shall upon request, co-operate with Sulzer Wood Ltd by providing all such information requested for the purposes of investigation and/or the defence of the claim. Any information provided will be treated as confidential and will not be used or applied for any other purposes than indicated above.
- d) The supplier shall retain a technical construction file for at least 10 years from the date of production of the last unit of goods of that type supplied.

SWQ06 Pressure Equipment Directive (EU DIRECTIVE 97/23/EC)

All goods within the scope of this purchase order shall satisfy the Pressure Equipment Directive (EU DIRECTIVE 97/23/EC). Accordingly:

- a) Relevant Specification/Classification Code.
- b) Component Cast Codes/Unique Serial Numbers.
- c) Manufacturers Name and Address.
- d) Notified Body Number.
- e) Reference to Manufacturers Test Report.
- f) A statement to certify that the product and particulars, which are given above, have been inspected at the manufacturer works and all documentation validated against Purchase Order requirements. (Certificate type: EN 10204 3.2).
- g) Notified Body's Name, Signature and Date. Conformity assessment, demonstrating compliance with European Union Directive 97/23/EC.
- h) Under the community regime, pressure equipment and assemblies within and above specified pressure/volume thresholds must:

1. Be safe;
2. Meet essential safety requirements covering design, manufacture and testing;
3. Satisfy appropriate conformity assessment procedures.
4. Carry the CE mark and other relevant information e.g. Notified Body Certificate Number

Under the community regime assemblies below specified pressure/volume must:

1. Be safe
2. Be designed and manufactured to sound engineering practice
3. Bear specified marking (but not the CE marking)

The same rules will apply everywhere in the community so that pressure equipment complying with the community regime may be placed on the market in any member state.

i) Other directives

Pressure equipment and other assemblies that are subject to the Directive may also have to comply with some other directives. In such cases, the CE marking indicates that the equipment or assembly also fulfils the requirements of those other directives.

SWQ07 Certificate of Non-destructive Test (NDT)

Each consignment of goods supplied against the purchase order shall be accompanied by a Certificate of Non-destructive Test, conforming to the applicable Standard and detailing the following minimum requirements:

- a) Non-destructive Procedure/Test Codes, e.g. ASME etc.
- b) Acceptance Specification.
- c) Only personnel qualified and certified according to SNT-TC-1A or EN 473 Level 2 or 3 or recognised National equivalents (e.g. CAN/CGSB 48.9712) shall carry out interpretation and evaluation of results.
- d) Results of Non-destructive Test Examinations, clearly stating the number of items that meet the requirements of the Acceptance Specification.
- e) Signature of qualified Operator/Inspector.
- f) Date of Non-destructive Test Examination.
- g) Any deviation from approved Non-destructive Test Data/Technique Sheet or any concessions granted by Sulzer Wood Ltd.
- h) Any other relevant information.
- i) Unless otherwise agreed with Sulzer Wood Ltd Quality Department, X-ray films must be supplied.

SWQ08 Material Certificates EN 10204 - 3.1/3.2

An original Material Certificate shall accompany each consignment of goods supplied against this purchase order. Conforming to the EN 10204 - 3.1 or EN 10204 – 3.2 Standard as stated on purchase order and detailing the following minimum requirements:

- a) Heat Treatment Condition.
- b) Results of Chemical Analysis.
- c) Results of Mechanical Tests applicable to Material Specification (including impact/hardness tests where applicable).
- d) Non-destructive Test Procedure details and results.
- e) Manufacturers Name and Cast Number (traceability requirements).
- f) Relevant Material Specification.
- g) Results of Pressure Test (if applicable).
- h) Statements to the effect that the materials supplied comply fully with the requirements of the Specification/Drawing and Purchase Order.
- i) Declaration of Conformity with 97/23/EC (As appropriate-See note 2).

- j) Each item must be clearly identified to maintain traceability to the certification, preferably metal stamped characters on a surface that will not subsequently be machined.
- k) Results of G48 corrosion testing (if applicable)

Note 1: In the case where Sulzer Wood Ltd purchases material, direct from stockists (e.g. bar, tube, plate, sheet etc) where no rework/testing has been carried out by the stockist, this certificate shall be an original manufacturers certificate or a verified true copy of the original. The verification stamp and signature is to be in coloured ink (not black) and is to be that of a person whose signature is registered to the Stockist/Manufacturers Certificate Verification Register. Copies of the Register must be held by Stockist/Manufacturer and shall be audited by Quality Engineering as part of the Quality Audit Assessment Programme.

Note 2: Equipment complying with Pressure Equipment Directive 97/23/EC. The manufacturer must provide a statement relating to compliance with required material properties and characteristics contained within the directive through an accredited Quality Management System.

The manufacturer must also take appropriate measures to ensure that the material conforms to required specifications and, that essential safety requirements stipulated in the Pressure Equipment Directive 97/23/EC are met.

SWQ09 Certificate of Load Test

A Certificate of Load Test detailing the following minimum requirements must accompany each consignment of goods supplied against this purchase order:

- a) Description of the Parts tested.
- b) Design Load and Proof Test Load.
- c) Testing Authority Standards compiled with for the purpose of Testing.
- d) Certification is to be identifiable with the goods they represent.
- e) Type of Test Visual/Load Test

Note: All items must be individually identified, batch certification will be rejected. Assemblies, such as clamp arrangements, may be identified with the same main identification number followed by a suffix reference e.g. 12345-A; 12345-B.

SWQ10 Fabrication Certification

Each consignment of goods supplied against this purchase order shall be accompanied by the following minimum requirements. All weld procedures and Welder qualifications used for this purchase order shall have prior approval of Sulzer Wood Ltd Quality department.

- a) Weld Procedure Specification (WPS) and Procedure Qualification Record (PQR) used for manufacture of items.
- b) Welder Qualifications used for Manufacture of items, and where appropriate, details and results of associated non-destructive tests.
- c) A statement to the effect that the items have been manufactured to fully meet the requirements of the Sulzer Wood Ltd Purchase Specification.
- d) NDT report and operator qualifications. (Only personnel qualified and certified according to SNT-TC-1A or EN 473 Level 2 or 3 or recognised National equivalents (e.g. CAN/CGSB 48.9712) shall carry out interpretation and evaluation of results.
- e) Consumable Certificates

Note: Where Radiographs are required, they shall be identified to the welds they represent.

SWQ11 Certificate of Pressure Test

Each consignment of goods supplied against this purchase order shall be accompanied by a Certificate Of Pressure Test, conforming to the applicable Standard and detailing the following minimum requirements:

- a) Design Code (Pressure vessels).
- b) Test Pressure, test medium and temperature.
- c) Test Duration and Acceptance Standard. Sulzer Wood Acceptance Standard for pressure testing is no leaks or pressure drop. Any deviation from this requires prior concession/agreement. Test Duration should be a minimum of 30 minutes.
- d) A statement to the effect that the tests detailed have been carried out satisfactorily in all respects.
- e) Test Chart
- f) Test Equipment Calibration Certificate

Note: Sample testing of each order item batch will only be allowed after approval by Sulzer Wood Ltd.

SWQ12 Certificate of Dynamic Balance

Each consignment of goods supplied against this purchase order shall be accompanied by a Certificate of Dynamic Balance, Conforming to the applicable Standard and detailing the following Minimum requirements:

- a) Concentricity/Swash Run Outs (as applicable).
- b) Dynamic Balance Values required by Sulzer Wood Ltd Specification/Drawing.
- c) Dynamic Balance Values achieved (actual values) in each plane.
- d) Test Equipment Calibration Certificate

SWQ13 Certificate of Suppliers Works Function Test

Each consignment of goods supplied against this purchase order shall be accompanied by a Certificate of Suppliers Works Test conforming to the applicable Standard and detailing the following minimum requirements:

- a) Details of Tests carried out as applicable to Specification/Part Number
- b) Statement that all Tests have been carried out and that the results satisfy fully the requirements of the specification.
- c) Test equipment Calibration Certificate

SWQ14 Type Test Report (Electric Motors)

Each consignment of goods supplied against this purchase order shall be accompanied by a Type Test Report detailing the following Minimum requirements:

- 1) Description of items including
 - a) Frame Size
 - b) Power Rating
 - c) RPM
 - d) Voltage
 - e) Amperage
 - f) Phase
 - g) Enclosure
 - h) Insulation Class
 - i) Connection i.e. Delta or other
 - j) Hz
 - k) Serial Numbers

- 2) Test results as required by the relevant equipment standard i.e. BS or other as agreed at point of enquiry.

SWQ15 Routine Test Report (Electric Motors)

Each consignment of goods supplied against this purchase order shall be accompanied by a Routine Test Report, conforming to the applicable Standard and detailing the following minimum requirements:

- a) Relevant Equipment Standards
- b) Detailed Results of Test carried out.
- c) Statement to the effect that the items have been assembled and tested and fully meet requirements of the relevant Sulzer Wood Ltd Specification/Standard.

Note: The Test report should specify the performance deterioration figure for the motor subject to temperature rise.

SWQ16 Performance Test Report

Each consignment of goods supplied against this purchase order shall be accompanied against a Suppliers Works Test Report conforming to the applicable Standard and detailing the following minimum requirements:

- a) Details and results of tests carried out including actual recorded values.
- b) Relevant Test Specification.
- c) Statements to the effect that the items supplied have been tested to and fully meet the requirements of the Sulzer Wood Ltd Purchase Specification including any relevant International Standards.

Note: The Test report should specify the performance deterioration figure for the motor subject to temperature rise.

SWQ17 Certification for Equipment for use In Potentially Explosive Atmospheres (ATEX 94/9/EC)

Each consignment of goods supplied against this purchase order shall be accompanied by current Conformity Assessment, demonstrating compliance with European Union Directive 94/9/EC and relevant methods of protection standards.

Note: Equipment marking shall be compliant with the ATEX Directive.

When packaged equipment or assemblies are supplied containing more than one item of certified equipment, the goods shall be accompanied by a Scope of supply.

SWQ18 Statement of Cure Date

Materials supplied against this purchase order may have a defined cure date; where this is the case it is important to clearly identify as appropriate:

- a) The Cure Date
- b) Batch Reference(s)
- c) Material Grade

Note: For substances/compounds, the above information shall be clearly identified on the container and consignment note.

SWQ19 Calibration/Test Report

Each consignment of goods supplied against this purchase order shall be accompanied by a Calibration/Test Report conforming to the applicable Standard and detailing the following minimum requirements:

- a) Test details (where applicable).
- b) Calibration Chart/Results, detailing the operating characteristics established by the tests in order to meet the specification requirements.
- c) Certification is to be identifiable with the goods they represent.
- d) Unique point to point calibration details, including method used and errors established at each point of calibration and, where appropriate, the specified tolerance band (when applicable).
- e) Statement that the tests detailed above have established that the items supplied fully meet the requirements of the Sulzer Wood Ltd Specification and any relevant National or International Standards.
- f) Certification is to be identifiable with the goods they represent.

SWQ20 Certificate of Cleanliness EN 10204-2.2

Each consignment of goods supplied against this purchase order shall be accompanied by a Certificate of Cleanliness Conforming to the EN 10204-2.2 Standard and detailing the following minimum requirements:

- a) A statement to the effect that 'Cleanliness checks have been carried out and that all internal and external surfaces are free from swarf, burrs, surplus sealant and other contaminants'.

Note: Where compliance with cleanliness standards are required, then the statement shall identify the Acceptance Standard achieved e.g. Flushing to API 614 requirements. Certification is to be identifiable with the goods they represent.

SWQ21 Certificate of Heat Treatment

Where the heat treatment of components is sub contracted to a Sulzer Wood Ltd approved supplier, a Certificate of Compliance is to be supplied with each consignment of goods, Conforming to the EN 10204-3.1B Standard and detailing the following minimum requirements:

- a) Method(s) of Heat Treatment (e.g. Induction).
- b) Quantity Treated and corresponding furnace number(s).
- c) Date of Heat Treatment.
- d) Heat Treatment Specification(s).
- e) Actual Temperature and time recorded.
- f) Brinell/DPN/HR Numbers for Hardened/Tempered Parts; and where requested the material specification.
- g) Calibration Certificate for Temperature Recorder

Note 1: The certificate shall be signed by supplier's Quality manager, Chief Inspector or nominated representative.

Note 2: Where Heat Treatment is to be carried out using more than one type/stage of process, then certification shall be supplied for each type and stage of the process; clearly identifying the sub suppliers employed. Certification is to be identifiable with the goods they represent.

SWQ22 Certificate of Survey (Designated Authority) EN 10204 – 3.2

Each consignment of goods supplied against this purchase order shall be accompanied by an Inspection Certificate Conforming to the EN 10204 – 3.2 Standard and detailing the following minimum requirements:

- a) Relevant Specification/Classification Code.
- b) Component Cast Codes/Unique Serial Numbers.
- c) Manufacturers Name and Address.
- d) Certificate Number (Inspectorate) and Classification Code.
- e) Reference to Manufacturers Test Report.
- f) A statement to certify that the product and particulars, which are given above, have been inspected at the manufacturers works and all documentation validated against Purchase Order requirements (Certificate type: BS EN 10204 3.2)
- g) Surveyors Name, Signature and Date.

SWQ23 Hazardous Substance Instructions

The substances to be supplied against the purchase order are classified by regulatory Health and Safety Authorities as Hazardous.

To facilitate the correct packing and despatch by Sulzer Wood Ltd to UK and overseas destinations, the supplier shall ensure that the correct marking and labelling is applied to approved substance containers and, that all relevant documentation demanded for the safe storage, transport and handling of goods is provided with the order consignment; this shall include the provision of Material Safety Data Sheet including emergency treatment data in the event of spillage.

SWQ24 Site Report

Where the purchase order requires service/inspection activities of product at site, a detailed report shall be provided within two weeks of completion and detailing the following minimum requirements:

- a) Sulzer Wood Ltd Purchase Order Number.
- b) Site.
- c) Equipment Module and Build Standard
- d) Engineer.
- e) Description of Findings/Service.
- f) Action Taken.
- g) Assessment or Test Results.
- h) Any Remarks.

SWQ25 Weight Certificate

All items of equipment within scope of supply shall be individually* weighed and certified to meet Sulzer Wood Ltd contractual requirements. Measuring equipment used for weighing equipment shall be fully calibrated and a copy of the measuring equipment calibration records, valid at the time of weighing shall be provided with the weight certificates detailing the following minimum requirements:

- a) Sulzer Wood Ltd Purchase Order Number.
- b) Sulzer Wood Ltd Part/Specification Number and Description.
- c) Number of Items* covered by the Certificate.
- d) Relevant Specification/Commodity Code.
- e) Equipment Unique Serial Number.
- f) Manufacturers Name and Address.

*Volume items such as fasteners may be weighed and certified as a complete batch, specifying the quantity of the batch on the weight certificate.

SWQ26 Documentation Package

The documentation packs generally comprise but are not limited to: index, cover sheet making a reference to job numbers and order no, detailed inspection report, NDT certificates, LOC's, COC's, material certificates, welding certificates, balancing certificate, pressure test certificate, final despatch inspection report and concession report.

All certification relating to the full workscope must be contained within the documentation package.

SWQ27 Painting Report

Daily inspection records will be maintained throughout the period of surface preparation and paint program. A paint report will be issued and will include the following details:

- a) Air and Steel Temperature
- b) Relative Humidity & Dew Point
- c) Surface Profiles
- d) Materials Used and Batch No's
- e) Individual Coat Dry Film Thickness
- f) Abrasive Used, Type and Grade
- g) Process Dates & Times (Commencement and Finish)
- h) Drying Times
- i) Final Colour
- j) Job Number
- k) Item Description

SWQ28 Submersible Electric Motors & Pumps (Repair or replacement)

Each consignment of goods supplied against this purchase order shall be accompanied by the following minimum requirements.

- a) Performance testing results shall accompany goods (as per SWQ16)
- b) Motor shall be filled with the appropriate fluid and must be labelled to indicate the fluids contained e.g. Glycol / Croda fluid etc.
- c) Motor shall be unpressurised and appropriate blanking plugs fitted to all ports.
- d) Cable tails are to be colour coded appropriately, e.g. Red/Yellow/Blue, to ensure correct direction of rotation on commissioning.
- e) Cable ends are to be protected against moisture ingress as follows: Tails shall be placed in a waterproof bag containing a sachet of silica gel desiccant; bag then being sealed to cable with waterproof tape
- f) The motor must be returned to Sulzer Wood in the supplied crate / container or in a suitable wooden crate if no packaging was supplied.
- g) An insulation resistance report (including power cables) must be provided to confirm unit is in line with original manufacturer's specification.
- h) Where power cable replacement deviates from original specification; agreement must be sought from Sulzer Wood Ltd.
- i) Where power cables are replaced; cable specification and data sheet must be supplied.

CERTIFICATION REQUIREMENTS

<i>ITEM</i>	<i>APPLICABLE CODE</i>
<i>Accumulators</i>	SWQ2, SWQ3, SWQ6, SWQ11
<i>Actuators</i>	SWQ2, SWQ3, SWQ6
<i>Air conditioning units</i>	SWQ2, SWQ3, SWQ5, SWQ17*
<i>Anti-vibration mountings</i>	SWQ2, SWQ3
<i>Battery chargers</i>	SWQ2, SWQ3, SWQ5, SWQ17*
<i>Battery and accessories</i>	SWQ2, SWQ3, SWQ17, SWQ23
<i>Bearings</i>	SWQ2, SWQ3
<i>Bolts</i>	SWQ8, SWQ2, SWQ3
<i>Breathers</i>	SWQ2, SWQ3
<i>Bursting discs</i>	SWQ2, SWQ3
<i>Cables (Electrical)</i>	SWQ2, SWQ3, SWQ17*
<i>Cable Accessories</i> (i.e. cable tray, clips, conduit accessories, connectors, crimp tags, glands, shrouds, sleeves, frames etc)	SWQ2, SWQ3
<i>Circuit breakers</i>	SWQ2, SWQ3, SWQ17*
<i>Coating of Parts</i> HVOF Electrolytic coatings, e.g. chrome, nickel etc Stellite	SWQ2, SWQ3
<i>Controllers</i> Hazardous area duty	SWQ2, SWQ3, SWQ17
Non-hazardous area	SWQ2, SWQ3
<i>Coolers</i>	SWQ2, SWQ3, SWQ6, SWQ11
<i>Couplings</i>	SWQ2, SWQ3, SWQ12*
<i>Dampers (Pulsation)</i>	SWQ2, SWQ3, SWQ6, SWQ11, SWQ17*
<u><i>Fabrication of Column Pipes</i></u>	SWQ2, SWQ3, SWQ7, SWQ8, SWQ10, SWQ11

Note: * To be determined as required

CERTIFICATION REQUIREMENTS

<i>ITEM</i>	<i>APPLICABLE CODE</i>
<u>Fans</u>	SWQ2, SWQ3, SWQ5*, SWQ17*
Fasteners (Standard) (i.e. Nuts, bolts, setscrews, washers, pins, dowels, inserts, helinuts, studs, aircraft rivets, studbolts, and nuts, bissell pins, spirol pins, rawplugs, rivets, keys etc)	SWQ2, SWQ3
Fasteners (Special) (i.e. non stockist items manufactures specifically to Sulzer Wood Ltd drawing/specification)	SWQ2, SWQ3, SWQ8
<i>Filter Assemblies</i>	SWQ2, SWQ3, SWQ6*, SWQ17*
<i>Flanges</i>	SWQ2, SWQ3
<i>Flame Arrestors</i>	SWQ2, SWQ3
<i>Flexible pipes</i>	SWQ2, SWQ3, SWQ11*
<i>Flow indicators</i>	SWQ2, SWQ3, SWQ19
<i>Flow meters</i>	SWQ2, SWQ3, SWQ5*, SWQ17*, SWQ19
Gaskets/joint (Fibre)	SWQ2, SWQ3
<i>Gauges</i> (Pressure)	SWQ2, SWQ3, SWQ11, SWQ19
(Temperature)	SWQ2, SWQ3, SWQ19
<i>Gearbox</i>	SWQ2, SWQ3
<u>Gears</u>	SWQ2, SWQ3
<u>Ground Bar – Straightness Spec</u>	SWQ2, SWQ3, SWQ8
<i>Guards (Shaft)</i>	SWQ2, SWQ3
<i>Heaters (Immersion)</i>	SWQ2, SWQ3, SWQ17, SWQ5
<i>Instrumentation</i>	SWQ2, SWQ3, SWQ17
<i>Keys</i>	SWQ2, SWQ3, SWQ8*

Note: * To be determined as required

CERTIFICATION REQUIREMENTS

ITEM	APPLICABLE CODE
<i>Lamps</i> Fluorescent, Tungsten	SWQ2, SWQ3, SWQ17*
<i>Level switches</i>	SWQ2, SWQ3, SWQ17*
<i>Lifting Equipment</i>	SWQ2, SWQ3, SWQ9
<i>Manufacture Component (SWL Drg)</i>	SWQ2, SWQ3, SWQ8*, SWQ10*
<i>Manufacture of New Bowl/Column Castings</i>	SWQ2, SWQ3, SWQ8, SWQ11
<i>Mechanical Seals - New</i>	SWQ2, SWQ3, SWQ17*
<i>Mechanical Seals - Repairs</i>	SWQ2, SWQ3, SWQ4
<i>Motors - New</i>	SWQ2, SWQ3, SWQ5, SWQ14*, SWQ15*, SWQ17*
<i>Motors – Repairs</i>	SWQ2, SWQ3, SWQ15
<i>Motors and pump units</i>	SWQ2, SWQ3, SWQ5, SWQ17, SWQ26, SWQ16*, SWQ14*
<i>Micro switches</i>	SWQ2, SWQ3, SWQ17*
<i>New Impeller Castings</i>	SWQ2, SWQ3, SWQ8
<i>‘O’ Rings</i>	SWQ2, SWQ3, SWQ18
<i>Painting</i>	SWQ2, SWQ3, SWQ27
<i>Pipework fittings</i>	SWQ2, SWQ3
<i>Pressure regulators</i>	SWQ2, SWQ3, SWQ6
<i>Pressure switches</i>	SWQ2, SWQ3, SWQ17*
<i>Process control instrumentation</i>	SWQ2, SWQ3, SWQ17*
<i>Proximity switches/Probes</i>	SWQ2, SWQ3, SWQ17*
<i>Pumps (Bareshaft)</i>	SWQ2, SWQ3, SWQ5, SWQ16*, SWQ17*, SWQ26*
<i>Pumps – Repairs i.e. Chemical Injection (Haskel, Williams, Bran & Luebbe)</i>	SWQ2, SWQ3, SWQ4, SWQ13
<i>Rupture discs</i>	SWQ2, SWQ3
<i>Gaskets</i>	SWQ2, SWQ3
<i>RTD's/Thermo Couple</i>	SWQ2, SWQ3, SWQ5, SWQ17*
Note: * To be determined as required	Note Castings – SWQ1 Applies rather than SWQ8 for bronze and cast iron items. SWQ8 applies and not SWQ1 for ST/Steel and duplex

CERTIFICATION REQUIREMENTS

<i>ITEM</i>	<i>APPLICABLE CODE</i>
<i>Shims</i>	SWQ2, SWQ3, SWQ8*
<i>Sight glasses</i>	SWQ2, SWQ3
<i>Solenoid Valves</i>	SWQ2, SWQ3, SWQ5, SWQ17*
<i>Springs/circlips (Standard)</i>	SWQ2, SWQ3
Submersible Motor Repair	SWQ2, SWQ3, SWQ13, SWQ15, SWQ26, SWQ28
<i>Taper Dowel Pins</i>	SWQ2, SWQ3
<i>Valves</i>	SWQ2, SWQ3, SWQ5
<i>Vibration monitoring equipment</i>	SWQ2, SWQ3, SWQ17*
<i>Weld Repairs</i>	SWQ2, SWQ3, SWQ10, SWQ22*
<i>Vessels (Pressure)</i>	SWQ2, SWQ3, SWQ6, SWQ8, SWQ22

Note: * To be determined as required