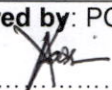
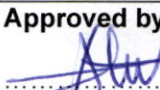


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1. INTRODUCTION

This product certification scheme is developed by the Tanzania Bureau of Standards under Product Certification Body (PCB) as scheme owner. This scheme is based on type five (5) scheme of ISO/IEC 17067. It includes the following functions and activities:

1.1. Selection, includes planning and preparation:

- a) Receiving application for product certification,
- b) Signing product certification agreement,
- c) Specifying standard to respective client application,
- d) Payment of certification charges,
- e) Communicating the evaluation plan to client.

1.2. Determination, includes:

- a) assessment of the production process and audit of other elements of the client's management system critical to managing product conformity through document review and onsite assessment;
- b) inspection and testing of the product,

1.3. Review, includes:

- a) Examining the evidence of conformity obtained during the determination stage to establish whether the specified requirements have been met.

1.4. Decision on certification, includes:

- a) Granting, maintaining, extending, reducing, suspending and withdrawing certification.

1.5. Licensing, includes:

- a) mark of conformity,
- b) publicity to applicants/licencees,
- c) misuse of certification and marks of conformity.

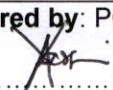
1.6. Surveillance, includes:

- a) inspection and testing of product samples from the factory and open market,
- b) assessment of the production process.

2. SCOPE

This scheme applies to basic metals and fabricated metal products such as steel bars, ribbed bars and fabricated metal products used in construction and industrial applications. It covers low-grade steels (300–450 MPa) and high-grade steels (500–700 MPa), both weldable and non-weldable. The scheme ensures conformity with TZS 142-2: 2020/EAS 412-2:2019 and TZS 142-4: 2022.



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3. PURPOSE OF SCHEME

The purpose of this scheme is to provide a set of rules which shall be followed in the certification of basic metals and fabricated metal products. The product certification body (PCB) shall conduct its certification services in accordance with ISO/IEC 17065 and with the requirements of this scheme. The clients of the product certification body (PCB) shall comply with the requirements of this scheme and the product certification agreement (scheme of inspection and testing) (TBS/QMD/PCERT/01/F04-005). The clients shall also comply with any requirements that may be imposed by the relevant product specification and any applicable country legal requirements.

4. PRE-CERTIFICATION ACTIVITIES

4.1. Legal Application Documents

Every client applying for product certification under this scheme shall be operating legally and shall have the following documents:

- a) Tax Identification Number (TIN) Certificate,
- b) Industrial Business Licence,
Other relevant documents are:
- c) Organization structure including QC/QA section,
- d) Premises Layout,
- e) Sketch Map for premises location,
- f) Production Process Flow Chat,
- g) List of Raw Materials and source,
- h) Label artwork,
- i) List of outsourced processes,
- j) Human and technical resources (e.g. Laboratories, inspection facilities etc.),
- k) Contact personnel.

4.2. Verification

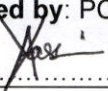
The TBS Product Certification Body (PCB) reserves the right to verify the authenticity of any documents of certification submitted by an applicant.

4.3. Compliance

The applicant shall ensure that meets the requirements of this product certification scheme before applying for product certification and ongoing basis.

4.4. Purchase of Standard

The applicant shall be required to purchase the standard of its product at TBS library or by requesting through info@tbs.go.tz or toll-free number **0800110827**.

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4.5. Competence of Personnel

Personnel involved in quality verification in the client organizations shall be competent in their duties. TBS Product Certification Body (PCB) reserves the right to verify this competency in terms of checking relevant trainings undertaken and performance evaluations.

4.6. Quality System

The applicant shall meet at least the minimum arrangements stipulated below for quality management of its quality system if not ISO 9001:2015 certified:

- a) Control of non-conforming products,
- b) Control of monitoring and measuring devices,
- c) Control of documented information,
- d) Plan for internal quality checks (identification of points of inspection and testing in the production process),
- e) Records of internal quality checks,
- f) Procedure for handling customer complaints and records,
- g) Schedule for maintenance of machines and records,
- h) Procedure for product traceability and recall.

4.7. Production Process Control Activities by Manufacturer

The applicant shall develop and maintain a manufacturing documentation that describes the manufacturing process. The documentation shall also specify aspects tested at all test or inspection points including the final product inspection or testing before dispatch as follows:

i. Incoming material

All incoming material into the process shall be verified for compliance with TZS 142-2:2020/EAS 412-2:2019 and TZS 142-4: 2022. Inputs shall have compliance certificates or compliance reports.

ii. Manufacturing control

The applicant shall possess or have access to, the necessary monitoring and measuring equipment specified in the relevant product standard. The equipment shall have valid calibration certificates or reports and these shall be retained. The applicant shall ensure that product compliance is monitored throughout the whole production process.

iii. Final product inspection

Finished products shall be checked for compliance with all applicable requirements of the TZS 142-2:2020/EAS 412-2:2019 and TZS 142-4: 2022. Records of such checking shall be retained.

iv. Surveillance Internal Inspection

The manufacturer shall conduct internal surveillance inspection and testing as

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follows:

a) Conformance testing:

- One specimen per 40 tonnes per cast.
- At least three test specimens per cast and diameter to test to confirm that the batch complies with the product standards TZS 142-2:2020/EAS 412-2:2019 and TZS 142-4: 2022.

4.8. Product Certification Fees

During product certification process, the client shall be required to pay factory assessment fee, testing charges and annual certification fee as stipulated in The Standards (Fees and Charges) Regulations, available in TBS website www.tbs.go.tz

4.9. Product Certification Process

4.9.1. Application for Product Certification

- The applicant shall follow process of obtaining a licence/certificate described in this scheme procedure below.
- The electronic application form available in tbs i-SQMT system shall be completed and submitted with the required information at the enquiry stage which include
 - Name of product(s) to be certified,
 - Standard or normative document to be used for certification,
 - General features of client including name and address of its physical location,
 - Client activities (process and operations), human resources, technical resources, applied contractual control of outsourced process and operations (if any) and legal obligations detailed in 4.1 above.
- The product certification agreement (TBS/QMD/PCERT/01/F04-005) shall be completed after fulfillment of certification application requirements.
- The assigned inspector (s) shall come up with an assessment plan for factory assessment as required by the relevant product standard.

4.9.2. Evaluation

i. Factory Assessment

- The factory assessment shall be conducted at the client's premises. This assessment shall include assessment of premises, production process control activities as per section 4.7, verification of the client's product quality management system and examination of the client's documents as well as a compliance checking of the client's products.
- The inspector (s) shall be guided by the assessment plan (TBS/QMD/PCERT/01/F02-004) and factory assessment checklist (TBS/QMD/PCERT/01/F02-005-C) in carrying out the assessment.
- Sampling for laboratory testing shall be carried out as per product standard. For

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TZS 142-2:2020/EAS 412-2:2019 (high-grade ribbed bars) and TZS 142-4: 2022 (low-grade ribbed bars, 300–450 MPa):

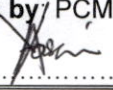
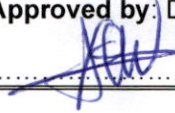
- 1) Sampling should cover all grades applied on certification scope, during the initial factory assessment.
 - 2) Samples must be taken randomly from production batches to avoid bias.
 - 3) Record diameter, cast number, bundle ID and delivery condition (straight, coil, cold-worked).
- d) After assessment activities have been completed, the assigned inspector (s) shall put together all the reports/evidence gathered during the factory assessment and submit to the zonal/certification manager who shall assign certification officer for review.

ii. Testing

The products shall be inspected and tested as per parameters laid down in the applicable product standards as per Table 1 below.

Table 1: Laboratory testing parameters as per TZS 142-2:2020/EAS 412-2:2019 and TZS 142-4: 2022

S/N	Test/ Characteristic	Requirement
1.	Mechanical properties: Mass per meter [kg/m] Yield stress, [N/mm ²] Tensile strength [N/mm ²] Elongation, [%] Bending and re-bend Rib height Rib spacing Rib inclination Rib perimeter	As per TZS 142-2:2020/EAS 412-2:2019 and TZS 142-4: 2022
2.	Chemical composition (%) Carbon Silicon Manganese Phosphorus Sulphur Nitrogen Copper Chromium Molybdenum Vanadium	

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	Nickel Carbon equivalent		
3	Markings: All bars should be identifiable by marks introduced during rolling		

4.9.3. Review

- a) The certification officer who was not involved in evaluation process shall review evaluation results.
- b) Preparation of licence shall be done if evaluation results comply to the requirements.
- c) Client shall be notified to take corrective actions if evaluation results do not comply with requirements.

4.9.4. Certification Decision

All product certification decision process shall be initiated after all the certification conditions have been met. All clients are promptly informed through electronic system of the certification decisions made and corrective actions required. Upon receiving notification on corrective action taken by the client, the inspector is sent for verification of non-conformities that had been raised during factory assessment and/or drawing re-test sample(s) and the process proceeds from clause 4.9.2 to 4.9.3.

4.9.5. Certification Documentation

- a) The licence/certificate and its respective documents which are Facsimile (TBS/QMD/PCERT/01/F04-006) and Schedule A (TBS/QMD/PCERT/01/F04-003) convey all information regarding name and address of Product Certification Body (PCB), the date certification is granted, name and address of the client, type of the product, brand name of the product, expiry date of the licence/certificate, specification used and the obligations pertaining to TBS and the client.
- b) The authentic TBS licence/certificate the signature of the DG, the TBS seal and electronic mark.
- c) No formal product certification documentation is issued to the client unless, the decision to grant or extend the scope of certification has been made, certification requirements have been fulfilled and certification agreement has been completed/signed.
- d) The licence/certificate issued are valid for one year. Licence/certificate shall be renewed annually after re-assessment of the client's product conformity.



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5. POST CERTIFICATION ACTIVITIES

5.1. Use of Licences, Certificates and Control of “tbs” quality mark

The Completed Product Certification Agreement (TBS/QMD/PCERT/01/F04-005) and the following conditions shall apply:

- The client may publicize the fact that certification has been granted and use the licence as evidence.
- The client shall not misrepresent the nature, status or scope of certification.
- The client shall strictly adhere to the use of the “tbs” mark of conformity as governed by Section 18 of The Standard Act, Cap 130, Regulation 3 of The Standards (Registration of Premises and Certification of Products) Regulations of 2021 as well as per licence document schedule A (TBS/QMD/PCERT/01/F04-003).
- The client shall mark the certified product with “tbs” standard mark as illustrated by facsimile document (TBS/QMD/PCERT/01/F04-006) for licence and for the certificate the words ‘APPROVED BY TBS TPC No.’ will be used.
- The conformity mark shall be applied to products manufactured at the premises where certification was conducted and which fall within the scope of certification as stipulated in the license/certificate.

5.2. Directory of Certified Products

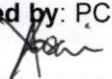
The PCB has in place an electronic system (iSQMT) that serves as directory for certified products and the information is made public through the biannual magazine namely “Announcer” and TBS official website “www.tbs.go.tz”.

5.3. Surveillance Activities

- Surveillance for both factory and open market is conducted at least two (2) factory surveillance assessment and (2) market surveillance assessment should be conducted in the preceded certification cycle. Maintenance of licence/certificate include compliance with conditions of the product certification agreement (TBS/QMD/PCERT/01/F04-005), that provides for the obligations of the licensee and the product certification body (PCB).
- Samples for certified products are collected from the factory and open market to ensure on-going fulfilment of product certification requirements covering grades and sizes available at the time of visit.
- The samples collected during surveillance shall be tested as per respective product standard as shown on Table 1 under this scheme.
- The surveillance visits shall be announced or unannounced. Where a visit shows non-compliance, the licence/certificate holder shall be required to institute corrective actions.
- The surveillance on open market shall also be conducted when there is a complaint over certified products. Whenever such assessment is conducted, the manufacturer shall be issued with a copy of the assessment report. Manufacturers shall be



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requested to disclose their markets to enable open market surveillance to be conducted. Where non-conformities are detected in the open market, the client shall be required to institute corrective actions which may involve product recall or replacement.

5.4. Non-Conforming Products

The licence/certificate holder shall have procedure for product traceability and recall which shall be used to trace and recall the product from the market when such product no longer fulfils product certification requirements.

5.5. Termination, Reduction, Suspension and Withdrawal of Certification

TBS Product Certification Body (PCB) reserves the right to terminate, reduce, suspend or withdraw certification under conditions stipulated in the product certification agreement (TBS/QMD/PCERT/01/F04-005).

5.6. Re-Instatement of Suspended License

PCB may re-instate the suspended license upon request and compliance of the corrective action made.

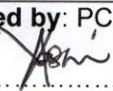
5.7. Complaints and Appeals

- All complaints and appeals related to product certification shall be handled as per customer complaints and appeals handling procedure TBS/QMD/PCERT/P02 and the complainant is informed on the outcome of the investigation.
- Upon receipt of a formal complaint or appeal, which is related to product certification, Product Certification Body (PCB) shall acknowledge receipt of the same through letters, email or electronic system (i-SQMT) and inform the client appropriately.
- The decision in resolving the complaint or appeal is reviewed and approved by personnel who were not involved in the product certification activities related to the complaint or appeal.
- Complainants are informed on the outcome of investigation through letters, email or electronic system (i-SQMT).
- Any client who is aggrieved of any Bureau's decision pertaining to product certification is allowed within fourteen days to appeal to the Minister responsible for Industry and Trade.

5.8. Access to Scheme

This product certification scheme shall be made available to all interested stakeholders on the TBS website www.tbs.go.tz.

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ANNEX I:

- (a) The standard mark of conformity for products standard TZS 142-2: 2020 - Steel for the reinforcement of concrete - Part 2: Ribbed bars



TZS 142-2/EAS 412-2

- (b) The standard mark of conformity for products standard TZS 142-4: 2022 - Steel for the reinforcement of concrete - Part 4: Ribbed bars - Low grade steel (300 - 450 MPa)



TZS 142-4

ANNEX II: Normative References

1. ISO/IEC 17067 – Fundamentals of product certification schemes.
2. ISO 10144:2018 – Certification scheme for steel bars and wires.
3. ISO 15630-1 – Test methods for reinforcing bars.
4. ISO/TR 9769, ISO 14284 – Sampling and analysis methods.
5. EAS 412-2:2022– Regional standard for ribbed bars.
6. TZS 142-2: 2020 - Steel for the reinforcement of concrete - Part 2: Ribbed bars.
7. TZS 142-4: 2022 - Steel for the reinforcement of concrete - Part 4: Ribbed bars - Low grade steel (300 - 450 MPa).