117th TESDA BOARD MEETING

07 November 2019, Thursday, 1:00 p.m.
7/F TESDA Board Room, Office of the Chair
TESDA Complex, South Luzon Expressway,
Fort Bonifacio, Taguig City

Resolution No. 2019 - 66 (Page 1 of 4 pages)

APPROVING AND PROMULGATING THE AMENDED TRAINING REGULATIONS FOR HEAVY EQUIPMENT OPERATION (TOWER CRANE) NC III

WHEREAS, TESDA Board Resolution No. 2007-20 was issued "Approving and Promulgating the Training Regulations for Heavy Equipment Operation (Tower Crane) NC II last 27 August 2007 during the 56th TESDA Board Meeting;

WHEREAS, it is the policy of TESDA to review after three (3) years any Training Regulations (TRs) promulgated by the TESDA Board;

WHEREAS, there is a need to review the existing Training Regulations in view of the developments in technology and current trends in the construction industry and in support of the Build, Build, Build Program of the government;

WHEREAS, the Association of Carriers and Equipment Lessors, Inc. (ACEL) with the assistance of Qualifications and Standards Office (QSO) of TESDA have reviewed the existing Training Regulations in Heavy Equipment Operation (Tower Crane) NC III, and recommended amendments;

WHEREAS, industry experts and partners, headed by the President of the Association of Carriers and Equipment Lessors, Inc. (ACEL), with the technical assistance of the Qualifications and Standards Office (QSO) endorsed the proposed amendments;

WHEREAS, during the 113th Standards-Setting and Systems Development (SSSD) Committee Meeting held on 05 November 2019, the Committee deliberated upon and agreed to favorably recommend the approval and promulgation of the amendments of the Training Regulations for Heavy Equipment Operation (Tower Crane) NC III, as attached in Annex "A" and made an integral part of this Resolution;

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Resolution No. 2019 - 69
(Page 2 of 4 pages)

APPROVING AND PROMULGATING THE AMENDED TRAINING REGULATIONS FOR HEAVY EQUIPMENT OPERATION (TOWER CRANE) NC III

WHEREAS, during the 117th TESDA Board Meeting on 07 November 2019 at 1:00 p.m., the TESDA Board considered the amendments and approved the promulgation of the amended Training Regulations for Heavy Equipment Operation (Tower Crane) NC III;

NOW, THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED, that the TESDA Board in its meeting today, 07 November 2019 at 1:00 p.m., has approved and promulgated the aforementioned Training Regulations for Heavy Equipment Operation (Tower Crane) NC III as herein appended;

BE IT RESOLVED, FINALLY, that:

- (1) Copies of this Resolution and the abovementioned Training Regulations be published in the Official Gazette or in a newspaper of general circulation, and disseminated to all concerned, and the same shall be effective fifteen (15) days upon publication;
- (2) All programs registered under the current Heavy Equipment Operation (Tower Crane) NC II must comply with the requirements of the abovementioned Training Regulations as amended. The one-year period of re-registration under this amended Training Regulations shall commence on the date of effectivity as indicated in the Implementing Guidelines/ TESDA Circular for the deployment of the Training Regulations to be issued by the TESDA Secretariat; and

(3) Graduates of TVET programs covered by the aforementioned Training Regulations shall be required to undergo mandatory assessment under the national assessment and certification program.

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117th TESDA BOARD MEETING

07 November 2019, Thursday, 1:00 p.m. 7/F TESDA Board Room, Office of the Chair TESDA Complex, South Luzon Expressway, Fort Bonifacio, Taguig City

> Resolution No. 2019 - 66 (Page 3 of 4 pages)

APPROVING AND PROMULGATING THE AMENDED TRAINING REGULATIONS FOR HEAVY EQUIPMENT OPERATION (TOWER CRANE) NC III

Adopted this 7th day of November 2019.

ATTY. MARICHELLE D. DE GUZMAN Board Secretary VI

Attested by:

SEC. ISIDRO S. LAPEÑA, PhD., CSEE Designated Chairperson, TESDA Board

Director General, Technical Education and Skills Development Authority

Department of Labor & Employment

USEC. DIOSDADO M. SAN ANTONIO Department of Education

USEC. BRENDA L. NAZARETH-MANZANO

Department of Science and Technology

USEC. EPIMACO V. DENSING III

Department of Interior & Local Government

MR. ISIDRO ANTONIO C. ASPER Board Member, Labor Sector

ATTY. BAYANI G. DIWA Board Member, Labor Sector

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Resolution No. 2019 - 66 (Page 4 of 4 pages)

APPROVING AND PROMULGATING THE AMENDED TRAINING REGULATIONS FOR HEAVY EQUIPMENT OPERATION (TOWER CRANE) NC III

MR. RAMON R. DE LEON Board Member, Labor Sector

DR. LEONIDA BAYANI-ORTIZ Board Member, Employer Sector MR. ROGELIO J. CHAVEZ, JR. Board Member, Labor Sector

DR. GUIMBA B. POINGAN Board Member, Education & Training Institutions Sector

MS. PATRICIA C. DALMAS Board Member, Education & Training Institutions Sector

AMENDMENTS ON TRAINING REGULATIONS FOR HEAVY EQUIPMENT OPERATION (TOWER CRANE) NC III

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)	Amendments
Qualification Title	
Heavy Equipment Operation	Heavy Equipment Operation
(Tower Crane) NC II	(Tower Crane) NC III
SECTION 1 – Definition of the Qualification	
The HEAVY-EQUIPMENT OPERATION (TOWER CRANE) NC II qualification consists of competencies that workers must achieve to enable them to perform tasks such as lifting and transferring of heavy loads in construction sites or other locations with the use of tower crane.	(TOWER CRANE) NC III qualification consists of competencies that workers must achieve to enable them to perform tasks such as inspection, basic preventive maintanance interpreting lead
Job Title	
• Tower Crane Operator SECTION 2: Competency Standards	Same
SECTION 2: Competency Standards Basic Competencies	Dania Campatanaira
 Participate in workplace communication Work in a team environment Practice career professionalism Practice occupational health and safety procedures 	 Lead workplace communication Lead small teams Apply critical thinking and problem-solving techniques in the workplace Work in a diverse environment Propose methods of applying learning and innovation in the organization Use information systematically Evaluate occupational safety and health work practices Evaluate environmental work practices Facilitate entrepreneurial skills for microsmall-medium enterprises (MSMEs)

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)	Amendments
 Common Competencies Prepare construction materials and tools Observe procedures, specifications and manuals of instruction Interpret technical drawings and plans Perform mensurations and calculations Maintain tools and equipment 	Same
 Core Competencies Perform pre-and post-operation procedures for lifting equipment Perform productive operation for tower crane 	 Core Competencies Perform pre and post-operation procedures for tower crane Perform basic preventive maintenance servicing for tower crane Perform productive operation for tower crane
SECTION 3: Training Arrangements 3.1 Curriculum Design:	
Nominal Training Hours: 18 Hours (Basic Competencies) 18 Hours (Common Competencies) 120 Hours (Core Competencies) 156 Hours - TOTAL	Nominal Training Hours: 40 Hours (Basic Competencies) 24 Hours (Common Competencies 160 Hours (Core Competencies) + 40 Hours - Supervised Industry Learning (SIL)
Carres Danasintina	TOTAL – 264 Hours
	The state of the s

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)

3.2 Training Delivery

The delivery of training should adhere to the design of the curriculum. Delivery should be guided by the 10 basic principles of the competency-based TVET.

- The training is based on curriculum developed from the competency standards;
- Learning is modular in its structure;
- Training delivery is individualized and selfpaced;
- Training is based on work that must be performed;
- Training materials are directly related to the competency standards and the curriculum modules;
- Assessment is based in the collection of evidence of the performance of work to the industry required standard;
- Training is based both on and off-the-job components;
- Allows for recognition of prior learning (RPL) or current competencies;
- Training allows for multiple entry and exit;
 and
- Approved training programs are nationally accredited.

The competency-based TVET system recognizes various types of delivery modes, both on and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities may be adopted when designing training programs:

- The dualized mode of training delivery is preferred and recommended. Thus programs would contain both in-school and in-industry training or fieldwork components. Details can be referred to the Dual Training System (DTS) Implementing Rules and Regulations.
- Modular/self-paced learning is a competencybased training modality wherein the trainee is allowed to progress at his own pace. The trainer only facilitates the training delivery.
- Peer teaching/mentoring is a training modality wherein fast learners are given the opportunity to assist the slow learners.

Amendments

AS PER NEW TR FRAMEWORK (TESDA BR 2014-04)

- The delivery of training shall adhere to the design of the curriculum. Delivery shall be guided by the principles of competency-based TVET.
 - a. Course design is based on competency standards set by the industry or recognized industry sector; (Learning system is driven by competencies written to industry standards)
 - Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies;
 - c. Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology.
 - d. Assessment is based in the collection of evidence of the performance of work to the industry required standards;
 - e. Assessment of competency takes the trainee's knowledge and attitude into account but requires evidence of actual performance of the competency as the primary source of evidence.
 - f. Training program allows for recognition of prior learning (RPL) or current competencies;
 - g. Training completion is based on satisfactory performance of all specified competencies.
- 2. The competency-based TVET system recognizes various types of delivery modes, both on-and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities and their variations/components may be adopted singly or in combination with other modalities when designing and delivering training programs:

Existing Promulgated Training Regulations (Board Resolution No. 2007-41)

- Supervised industry training or on-the-job training is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire a specific competencies prescribed in the training regulations.
- Distance learning is a formal education process in which majority of the instruction occurs when the students and instructors are not in the same place. Distance learning may employ correspondence study, or audio, video or computer technologies.

Amendments

2.1 Institution- Based:

- Dual Training System (DTS)/Dualized
 Training Program (DTP) which contain both in-school and in-industry training or fieldwork components. Details can be referred to the Implementing Rules and Regulations of the DTS Law and the TESDA Guidelines on the DTP;
- Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video, computer technologies or other modern technology that can be used to facilitate learning and formal and non-formal training. Specific guidelines on this mode shall be issued by the TESDA Secretariat.
- The traditional classroom-based or incenter instruction may be enhanced through use of learner-centered methods as well as laboratory or field-work components.

2.2 Enterprise-Based:

- Formal Apprenticeship Training within employment involving a contract between an apprentice and an enterprise on an approved apprenticeable occupation.
- Informal Apprenticeship is based on a training (and working) agreement between an apprentice and a master craftsperson wherein the agreement may be written or oral and the master craftsperson commits to training the apprentice in all the skills relevant to his or her trade over a significant period of time, usually between one and four years, while the apprentice commits to contributing productively to the work of the business. Training is integrated into the production process and apprentices learn by working alongside the experienced craftsperson.
- Enterprise-based Training- where training is implemented within the company in accordance with the requirements of the specific company. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)	Amendments
	2.3 Community-Based: • Community-Based Training – short term programs conducted by non-government organizations (NGOs), LGUs, training centers and other TVET providers which are intended to address the specific needs of a community. Such programs can be conducted in informal settings such as barangay hall, basketball courts, etc. These programs can also be mobile training program (MTP).
3.3 Trainee Entry Requirements	
This section specifies the qualifications of trainees and educational experience. Other requirements like health and physical requirements may also be stated. Passing written entrance examinations may also be indicated if necessary. • can communicate both orally and in writing • physically and mentally fit • with good moral character • can perform basic mathematical computation	training should possess the following requirements: • At least Junior High School Level Completer or an Alternative Learning System (ALS) Certificate of Completion with grade 10

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)

3.4 List of Tools, Equipment and Materials

Recommended list of tools, equipment and materials for the training of 25 trainees for the operation of tower crane.

	TOOLS		EQUIPMENT	1	MATERIALS
QTY	THE STATE OF THE PARTY OF THE P	QTY		QTY	
1 set	Wrenches (box and open-end_8-24 mm-metric & 7/16 –1" - English)	1 unit	Tower crane(MOA / rental)	5 kls	Multi- purpose grease
1 set	Hammer_ballpeen (3-4 lbs)			1 pair	Working clothes
1 set	Pliers (mechanical 10 ")			10 pairs	Safety shoes
1 pc	Adjustable wrench (18 ")				
1 pc	Grease gun			10 pairs	Gloves
1 set	Screw driver(_10 * lat & Philips)			10 pcs	Goggles
				10 pcs	Dust Mask
				10 pcs	 Hard hat
				2 units	Test weights - 3 tons - 5 tons
				1 pc	Tower crane miniture
				1 pc	Operator's manual with load chart

Amendments

List of tools, equipment and materials for the training of a maximum of 25 trainees for Crawler Crane Operation NC III are as follows:

	TOOLS		EQUIPMENT		MATERIALS
QTY		QTY		QTY	
1 set	Wrenches (box and open-end_8-24 mm-metric & 7/16 -1° - English)	den.	Tower crane with camera/monitor (optional) certified by Third Party accredited by DOLE-OSHC (Memorandum of Agreement (MOA)/ rental)	5 kgs.	Grease
5 pcs.	Hammer ballpeen (3-4 lbs.)	1 unit	Portable electric air compressor, 180 cfm	10 cans	Penetrating oil
5 pcs.	Pliers (mechanical 10 ")	1 unit	Generator, 300KVA(MOA / rental)	1 unit	Fire extinguisher, 10 lbs., dry chemical
5 pcs.	Adjustable wrench (8",10", 12",18 ") 1 piece for each size	2 units	Two-way radio	1 unit	Test weights - 2 tons
2 pcs.	Grease gun (portable)	1 unit	Crawler Crane Simulator (Optional) Display (Screen, Monitor), Controls, Software and Hardware Components, Seat with Seatbelt, Power Supply (110- 230 V 50-60Hz)	1 unit	Test weights - 4 tons
5 pcs.	Screw driver (_10", flat)	pcs	Safety Equipment/PPE (Safety vest, Gloves, Goggles, Dust mask, Hard Hat)	1 pc.	Tower crane miniature, (1:50 scale)
5 pcs.	Screw driver (10°, Philips)	5 pairs	Safety Equipment/PPE (Safety Shoes)	1 pc.	Operator's manual with load chart
5 pcs.	Putty knife			5 pcs.	Full body harness with double lanyard and rebar hook
2 pcs.	Pry bar (heavy duty)				
2 pcs	Shackle				
2 pcs.	(2 tons capacity) Shackle (6.5 tons capacity)				
2 pcs.	Shackle (8.5 tons capacity)				
2 pcs.	Web sling (2 tons capacity)				
2 pcs.	Web sling (4 tons capacity)				
2 pcs.	Chain sling (2 tons capacity)				
2 pcs.	Chain sling (4 tons capacity)		The state of the s		
2 pcs.	Wire rope sling (2 tons capacity)				
2 pcs.	Wire rope sling (4 tons capacity)				
2 pcs.	Eye bolt (4 tons)				
2 pcs.	Turn buckle (4 tons)			-	
1 set	Impact wrench (1/2 to 1 inch drive)				
2 pcs.	Nylon Taglines (16mm x 6m)			1000	

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)

3.5 Training Facilities

Space

The tower crane operation workshop must be of concrete structure. Based on class size of 25 students/trainees the space requirements for the teaching/learning and circulation areas are as follows:

Size in

Area in

Total Area

Requirement	Meters	Meters	Meters	
Student/Traine e Working Space	2 x 2m	4 sq. m. per student	100 sq. m.	
Lecture Room	8 x 6m	48 sq. m.	48 sq. m.	
Learning Resource Center	4 x 6m	24 sq.m.	24 sq.m.	
Facilities/Equip ment/ Circulation Area			52 sq. m.	
T	otal worksh	op area:	224 sq. m.	
Working Field	0.25 he	ctare (MO	A/Rental)	

Amendments

Based on class intake of 25 students/ trainees.

Space Requirement	Size in Meters	Area in Sq. Meters	Total Area in Sq. Meters
Student/Traine e Working Space (Maintenance Workshop)	2 x 2m	4 sq. m. per student	100 sq. m.
Lecture Room	8 x 6m	48 sq. m.	48 sq. m.
Learning Resource Center	4 x 6m	24 sq.m.	24 sq.m.
Facilities/Equip ment/ Circulation Area	6.5 x 8m	52 sq. m.	52 sq. m.
Working Field	20 x 75m	1,500	1,500 sq. m.
То	1,724 sq. m.		

NOTE: Training Center may enter into Memorandum of Agreement (MOA) with industry for use of facilities and heavy equipment

3.6 Trainer's Qualifications

- Must be a holder of Heavy Equipment Operation (Tower Crane) NC-II or equivalent qualification
- Must have undergone training on Training Methodology II (TM II) or equivalent training/experience
- Must be computer-literate
- Must be physically and mentally fit
- Must have at least 5 years job/industry experience*
- Must be a civil-service eligible (for government position or appropriate professional license issued by the Professional Regulatory Commission)
- * Optional. Only when required by the hiring institution.

Reference: TESDA Board Resolution No. 2004 03

- Holder of National TVET Trainer
 Certificate (NTTC) Level I in Heavy
 Equipment Operation (Tower Crane) NC
 III
- Must have completed the 40-Hour Construction Occupational Safety and Health (COSH) per Department Order No. 13 s. 1998, Guidelines Governing Occupational Safety and Health in the Construction Industry conducted by OSHC and DOLE accredited Safety Training Organizations
- Must be computer-literate
- Must have had at least 5 years job/industry experience

3.7 Institutional Assessment

Institutional assessment is undertaken by trainees to determine their achievement of units of competency.

NO Amendments

A certificate of achievement is issued for each unit of competency. **Existing Promulgated Training Regulations Amendments** (Board Resolution No. 2007-20) SECTION 4 National Assessment and Certification Arrangements To attain the National Qualification of HEAVY Competency Assessment is the process of EQUIPMENT OPERATION (Tower Crane) collecting evidence and making judgments NC II, the candidate must demonstrate whether competency has been achieved. The competence in all the units of competency purpose of assessment is to confirm that an listed in Section 1. The successful candidate individual can perform to the standards expected shall be awarded a National Certificate at the workplace as expressed in relevant signed by the TESDA Director General. competency standards. The assessment process is based on 4.2 The qualification of HEAVY EQUIPMENT evidence or information gathered to prove OPERATION (Tower Crane) NC II may be achievement of competencies. The process may through demonstration attained be applied to a full qualification or employable competence in a project-type assessment unit(s) of competency in partial fulfillment of the covering the following core units: requirements of the national qualification. 4.2.1 Tower Crane Operation Perform pre-and post-operation for 4.1 NATIONAL ASSESSMENT AND **CERTIFICATION ARRANGEMENTS** lifting equipment Perform productive operation for 4.1.1 A National Certificate (NC) is issued when crawler crane candidate demonstrated has competence on all units of competency in Assessment shall focus on the core units of a qualification with a promulgated competency. The basic and common units shall Training Regulations. be integrated or assessed concurrently with the Individuals wanting to be certified will core units. have to be assessed in accordance with the requirements identified in the relevant The following are qualified to apply for

- assessment and certification:
 - 4. 4.1 Graduates of formal, non-formal and informal institutions including enterprisebased training programs
 - 4.4.2 Experienced workers (wage employed or self employed)
- 4.5 The guidelines on assessment and certification are discussed in detail in the "Procedures Manual on Assessment and Certification" and "Guidelines on the Implementation of the Philippine TVET Qualification and Certification System (PTQCS)".
- unit/s of competency.
- Assessment shall cover competencies of the qualification with the basic and common units integrated or assessed concurrently with the core units of competency.
- 4.1.4 The following are qualified to apply for assessment and certification:
 - Graduates of formal, non-formal and informal institutions and enterprisebased training programs
 - Experienced Workers (wage employed or self-employed)
- 4.1.5 For the renewal of valid or expired National Certificate (NC) under Heavy Equipment Operation (Tower Crane) NC Il will have to undergo assessment in the amended TR for Heavy Equipment Operation (Tower Crane) NC III.

Existing Promulgated Training Regulations	Amendments
(Board Resolution No. 2007-20)	
	 4.1.6 Recognition of Prior Learning (RPL). Candidates who have gained competencies through informal training, previous work or life experiences may apply for recognition in a particular qualification through competency assessment. 4.1.7 The industry shall determine assessment and certification requirements for each qualification with promulgated Training Regulations. It includes the following:
	 a. Entry requirements for candidates b. Evidence gathering methods c. Qualification requirements of competency assessors d. Specific assessment and certification arrangements as identified by industry
	4.2 COMPETENCY ASSESSMENT REQUISITE
	4.2.1 Self-Assessment Guide. The self-assessment guide (SAG) is accomplished by the candidate prior to actual competency assessment. SAG is a pre-assessment tool to help the candidate and the assessor determine what evidence is available, where gaps exist, including readiness for assessment.
	 This document can: a. Identify the candidate's skills and Knowledge b. Highlight gaps in candidate's skills and knowledge c. Provide critical guidance to the assessor and candidate on the evidence that need to be presented d. Assist the candidate to identify key areas in which practice is needed or additional information or skills that should be gained prior `
	4.2.2 Accredited Assessment Center. Only Assessment Center accredited by TESDA is authorized to conduct competency assessment. Assessment centers undergo a quality assured procedure for accreditation before they are authorized by TESDA to manage the assessment for National Certification.

Existing Promulgated Training Regulations (Board Resolution No. 2007-20)	Amendments	
	4.2.3 Accredited Competency Assessor. Only accredited competency assessor is authorized to conduct assessment of competence. Competency assessors undergo a quality assured system of accreditation procedure before they are authorized by TESDA to assess the competencies of candidates for National Certification.	