

Global Partnership for Improving the Food Cold Chain in the Philippines

Activity	Workshop on the Development of the Competency Standards for Industrial Refrigeration
Date/Time	June 2-4, 2023, 9:00AM – 6:00PM
Venue	Ciudad Christia Ampud, San Mateo, Rizal
Participants	<p>Project Team Gilda Garibay – FCC Project Lead Manuel Azucena – CCI-Hub Coordinator</p> <p>TESDA Samuel Calado Jr. – QSO Paolo Sam N. Muñoz - QSO Michael Edione Gayona - GTC</p> <p>Cold Chain Industry Cesar Lim – Kilojoules Consultancy Augusto Quitco – RACTAP / Koppel Kriz Bernardino – KSB HVAC Lamberto Baldovino – ILAC Refrigeration and Air-Conditioning Center Ramon Elias F. Ortiz – RACTAP Anthony Recella – METS Logistics, Inc/ Ronald Jayson F. Mangahas – KFC RAMCAR Edrian P. Laki – KFC RAMCAR Mark Jayson Mercado - GNQ Industrial & Contracting Corporation</p>
Topic/Agenda	Highlights
Competency Standards (CS) Development for Industrial Refrigeration	<p>Day 1</p> <p>TESDA representatives from QSO started the workshop with an orientation on the appropriate procedures of developing the Competency Standards (CS) and on the Philippine Quality Framework (PQF) to give the proper background/knowledge to the experts and industry practitioners present during the three (3) day workshop.</p> <p>Mr. Calado, QSO representative, commenced the workshop proper by guiding the panel of technical experts in the development of the functional map/analysis.</p> <p>Mr. Cesar Lim, an industry practitioner and technical expert of Heating, Ventilation and Air Conditioning (HVAC), presented the previous CS that was developed way back 2004 to identify which competencies need updating. The technical experts reviewed the job role and operating procedure which worker must know in order to utilize his/her skills in the workplace. Candidates must be trained to handle Industrial Refrigeration equipment with the following refrigerants: Ammonia, Carbon Dioxide (CO₂), or glycol. These are environmental friendly, but some are toxic to humans. Therefore, proper handling and operating of equipment must be done by the candidate to prevent any harmful effects due to human error or human contact to the substances.</p>

	<p>Industry practitioners, Mr. Mangahas and Mr. Azucena, clarified that the competencies that the worker must possess should be highly involved in operations, maintenance, performing start-up, commissioning and troubleshooting. They reiterated that “installation” must not be part of the CS since this job is done by the contractor. A comparison to the Training Regulations (TR) of Ice Plant Refrigeration Servicing NC III was also done since there are a number of competencies that are parallel or similar to that of Industrial Refrigeration.</p> <p>Day 2</p> <p>Discussion between the technical experts and industry practitioners regarding which Level in the Philippine Quality Framework (PQF) was raised to clarify the specific job title that the candidate will attain after being assessed of his/her competencies.</p> <p>Through the CS development discussion, the Core Competencies are as follows as agreed by the technical experts and industry practitioners:</p> <ol style="list-style-type: none"> 1. Perform start-up, test and commissioning for industrial refrigeration plant 2. Operate industrial refrigeration plant 3. Maintain industrial refrigeration plant 4. Troubleshoot industrial refrigeration plant system <p>PQF level of the CS for Industrial Refrigeration be at Level III or the National Certificate III for this qualification when developed into a TR. This recommendation justifies the “operation” job role of the worker, and not specializing on “supervision”. Industry experts reiterated the importance of the operation because the industry lacks this. PQF Level IV or National Certificate NC IV signifies supervisory skills, whereas the developed CS done during this workshop involved only operational procedures which merits PQF Level III.</p> <p>Day 3</p> <p>Discussion on the specifications of the training facility were also addressed since not all training centers may be able to provide the equipment required for training candidates for Industrial Refrigeration. Along with Section 3, trainee requirements, trainer’s qualifications, and list of tools, equipment and materials were enumerated and stated in the draft CS.</p>
Finalization	<p>Mr. Calado finalized the draft CS until Section 3 together with the technical experts during the last day of the workshop. This includes:</p> <p>Section 1 – Industrial Refrigeration Operation & Maintenance Level III Qualification Description</p> <p>Section 2 – Competency Standards</p> <ol style="list-style-type: none"> a. Basic Competencies b. Common Competencies c. Core Competencies <p>Section 3 – Trainee Entrée Requirements, Trainer’s Qualifications, List of Tools, Materials and Equipment, and Training Facilities</p>

	Glossary of Terms Acknowledgements
Recommendation / Next Step	The QSO representatives, with the concurrence of the panel of technical experts, recommend the approval of the developed CS for immediate implementation. For future reference, this may be developed into a full-blown TR to supersede the existing Ice Plant Refrigeration Servicing NC III.

PHOTO DOCUMENTATION









Development of Industrial Refrigeration Competency Standard Workshop

Ciudad Christia Resort, San Mateo Rizal

June 2-4, 2023

June 02, 2023

ATTENDANCE SHEET

NO	NAME	DESIGNATION	INSTITUTION / AGENCY	EMAIL ADDRESS	GENDER	SIGNATURE
1	Mamuel P. Arzuena	Leor	CC1 - IHub		M	
2	Kriz S. Bernardino	Service Manager KSB HVAC/R	KSB HVAC/R	Kriz-bernardino@ yaho.com.ph	M	
3	AUGUSTO T. QUITO	PRES.	KACTOP	ogianguitaoyako.com.ph	M	
4	CESAR LUIS LIM.	MR/UNIDO	KICIC/UNIDO	cesarluis.lim@gmail.com.ph	M	
5	MARK JAYSON MENDOZA	SALES MANAGER	TESDA	markjaysonmendoza@gmail.com	M	
6	PABLO SAM N. MUÑOZ	TESD Specialist II	TESDA	pnmunoz@tsda.gov.ph	M	
7	SHAMUEL E. CANABO JR	GR TESD SPECIALIST	TESDA - QSO	quialabojr@tsda.gov.ph	M	
9	RAMON ELIAS F. ORTIZ	DIRECTOR	RACTAP	genvent@racc.gov.ph	M	
8	LAMBERTO BAUDOVID	SERVICE INSTRUCTOR	IAC HVAC/R	lbaldovino2024@gmail.com	M	
10	ANTHONY BECELA	FLN NATL MANAGER	TESDA	anthony.a.vecelo@gmail.com	M	
11	R.J.E. MANGOHAS	Armonio Ref. Manager	RANICAR	randjoxsonm@ yaho.com	M	
12	ERISIAN P. LARI	PROJECT ANALYST	RANICAR	engerrarianlari@gmail.com	M	
13	Michael Edione Grayona	Senior TESD Specialist	TESDA	megrayona@tsda.gov.ph	M	



Development of Industrial Refrigeration Competency Standard Workshop

Ciudad Christia Resort, San Mateo Rizal

June 2-4, 2023

June 03, 2023

ATTENDANCE SHEET

NO	NAME	DESIGNATION	INSTITUTION / AGENCY	EMAIL ADDRESS	GENDER	SIGNATURE
1	Manuel P. Amador	Coor.	CCI - Hub		M	
2	AUGUSTO T. QUIRO	PROJES	KACTIP		M	
3	Keriz S. Bernardino	Service Manager	KSB HVAC/R		M	
4	WALTERINO BERNARDINO	sen vice manager	WRC HVAC/R		M	
5	CESSA WIS CR.	MR/CONSULTANT	KAC/UNIBIC			
6	MARK JAYSON MENTGARD	SALES	GNG		M	
7	PAOLO SAM N. MUNOZ	TESD Specialist II	TESDA		M	
9	SAMUEL E. CALADO JR.	SP. TESP SPECIALIST	TESDA - QSO	socialadiv@tesda.gov.ph	M	
8	ANTHONY REBERA	FIN ANTL MANAGER	TESDA - QSO		M	
10	KEE E. MORGACHAS	Ammanig Ref. Manager	KAMCAR	tonaldjaysonm@yahoo.com	M	
11	EDRIAN P. VAKI	PROJES ANALYST	RAMCAR	engretrian1aki@gmail.com	M	
12	Michael Edione Grayana	Senior TESP Specialist	TESDA	megrayana@tesda.gov.ph	M	
13						



Development of Industrial Refrigeration Competency Standard Workshop

Ciudad Christhia Resort, San Mateo Rizal

June 2-4, 2023

June 04, 2023

ATTENDANCE SHEET

NO	NAME	DESIGNATION	INSTITUTION / AGENCY	EMAIL ADDRESS	GENDER	SIGNATURE
1	Mamuel P. Arceles	Labr	CEI-4ub		M	
2	AGASTO T. QUIRO	PRES.	FACTORAP		M	
3	Krin S. Bernardino	Service Manager	KSB AVAC/R		M	
4	ARMENDE BAYONUA	Service Manager	AVR AVAC L		M	
5	CESAR LUIS LIN	klc-UMRD	MP / CONSULTANT		M	
6	MARK JAYSON MENDOZA	SALES	GNQ		M	
7	PAUL SAM N. MENDOZA	TESD Specialist II	TESDA		M	
9	SAMUEL E. CALADO JR	SR. TESD SPECIALIST	TESDA-OSO	secaladojr@tesda.gov.ph	M	
8	ANTHONY PEREIRA	Project Manager	MESS CONSULTING INC.	tonaldjperera@gmail.com	M	
10	RJ E. Mangahas	Project Analyst	RAMCAR	rajmangahas@gmail.com	M	
11	ERIAN RIVERA	Senior TESD Specialist	TESDA	meryanrivera@tesda.gov.ph	M	
12	Michael Edione Gayona	Senior TESD Specialist	TESDA	meryanrivera@tesda.gov.ph	M	
13	Gilda Gamboa	Proj Lead	UMRD		F	