



Co-organizer 合辦單位:



Organizer 承辦單位:



ASHRAE 澳門分會 - 供暖、製冷及空調工程師學會



Supporting Organizations 支持單位:



新型製冷劑及 R-32 空調設備安裝與維修工作坊

New Refrigerant and R-32 Air Conditioning Equipment Installation and Maintenance Workshop

Date 日期	1st, 2nd and 5th December 2022 / 3 Classes 2022 年 12 月 1、2 及 5 日 / 共三期		
Time 時間	9:00am to 1:00pm 早上 9 時至下午 1 時		
Venue 地點	Labour Affairs Bureau Furama Vocational Training Centre (Rua Seis do Bairro da Areia Preta, No.158, Centro Industrial Furama, 1 andar) 勞工事務局威雄職業培訓中心 (地址: 澳門黑沙環第六街 158 號威雄工業中心一樓)		
Language 語言	Cantonese 廣東話	Application Deadline 截止報名日期	24 November 2022 2022 年 11 月 24 日
Fee 費用	Free of Charge 免費	Quota 名額	30 pax ; (Each class – 10 pax) 30 名; (每期 10 名) If the number of eligible applicants exceeds the number of places, the admission order will be determined by drawing lots. 如符合報讀條件者人數超出學額, 將以抽籤方式決定入學次序。
On-Line Registration 網上報名	https://docs.google.com/forms/d/e/1FAIpQLSeD_aB3jWSv63p49Z2NVUGGmqJ-7r4aXYWesfz1CR9Ob0dkQ/viewform?usp=pp_url Any query, please email to info@ashrae-macao.com or call 62885380. 任何查詢, 請電子郵件至 info@ashrae-macao.com 或致電 62885380. Successful Applicants will be notified by email on or before 28 November 2022. 成功報名者將於 2022 年 11 月 28 日或之前經電郵被通知。		報名 QR Code 
Theme 培訓目標	Enhance training participants' expertise in the characteristics of new refrigerants, the installation and maintenance of R-32 air conditioning equipment, and operational safety. 提高參與培訓的人士對新型製冷劑的特性以及安裝與維修 R-32 空調設備的專業知識及工作期間的操作安全。		
Introduction 簡介	Due to the mild flammability of R-32 refrigerant, which is widely used in household air-conditioning equipment, the course will introduce the characteristics of new refrigerants; Safety requirements and precautions to improve the safety of people in the industry when they carry out relevant work. 由於廣泛應用於家用空調設備的 R-32 製冷劑具有輕度易燃特性, 課程將介紹新型製冷劑的特性; 安裝與維修保養 R-32 空調設備和充注及回收 R-32 製冷劑時的安全要求及注意事項, 提高業內人士進行有關工作時的安全性。		
Certificate 出席證明	After completing the course (with an attendance rate of 100%), the participants can go to the self-service machine of the Labour Affairs Bureau to print the supporting documents. 完成課程後 (出席率達 100%) 的學員可自行到勞工事務局自助服務機列印證明文件。		
Target Participant 對象	Personnel engaged in the installation, inspection and maintenance of air-conditioning equipment in Macau (including local residents and non-local employees, local residents are preferred) 從事空調設備安裝、檢查及維修之持有有效澳門居民身分證或外地僱員身份認別證之僱員, 其中澳門居民可獲優先參加		
Application Conditions 報讀條件	Applicants must have experience in the installation, inspection and maintenance of air-conditioning equipment, and submit a letter of recommendation or employment certification issued by an industry group or company related to air-conditioning equipment. The relevant documents must list the job position. 報名者須具備空調設備安裝、檢查及維修經驗, 並提交空調設備相關行業團體或公司發出之推薦信函或在職證明文件, 相關文件須列明工作職位。		
Remarks 備註	All participant need to complete the full vaccination of the new coronavirus vaccine (ie two doses) for 14 days. Or hold a negative certificate for the new coronavirus nucleic acid test within seven days. Failure to present the above vaccination/NAT with a negative test certificate are not allowed to participate in the workshop and will be regarded as absent. 所有參與工作坊的學員需完成新型冠狀病毒疫苗的全程接種 (即兩針) 達 14 天, 或持有七天內新型冠狀病毒核酸檢測陰性證明。未能出示上述疫苗接種/核酸檢測陰性證明的學員, 不得參與工作坊, 期間的課堂被視為缺勤。		



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Supporting Organizations 支持單位:



澳門機電從業員協會
Associação dos Profissionais de Electromecânica de Macau
Macao Electrical & Mechanical Professionals association

新型製冷劑及 R-32 空調設備安裝與維修工作坊

New Refrigerant and R-32 Air Conditioning Equipment Installation and Maintenance Workshop

Content & Program 具體內容說明及流程

Time 時間	Content 內容
09:00 - 09:45 (45 mins 分鐘)	Part 1 : Introduction to HFC Control and New Refrigerants, Characteristics of R-32 Refrigerant 第一部分：氫氟碳化物管制及新型製冷劑簡介內容, R-32 製冷劑的特性 1. Contents of HFC Control ; 氫氟碳化物管制內容 2. Introduction of New Refrigerants ; 新型製冷劑簡介 3. Characteristics of R-32 Refrigerant ; R-32 製冷劑的特性 4. Safety Requirements and Precautions for Handling, Storage and Transportation of R-32 Refrigerant ; R-32 製冷劑處理、儲存及運輸的安全要求及注意事項
09:45 - 11:45 (120 mins 分鐘)	Part 2 : Installation and Maintenance Steps and Safety Measures of Typical R-32 Air Conditioning Equipment 第二部分：典型 R-32 空調設備的安裝與維修保養步驟及安全措施 1. Procedure and Safety Measures for Installing or Replacing R-32 Air Conditioners ; 安裝或更換 R-32 空調設備的步驟及安全措施 2. Procedures and Safety Measures for Repairing or Maintaining R-32 Air Conditioners ; 維修或保養 R-32 空調設備的步驟及安全措施 3. Recovery Process of R-32 Refrigerant ; R-32 製冷劑的回收流程
11:45 - 12:45 (60 mins 分鐘)	Part 3 : Real Machine Practice 第三部分：實操練習 Students doing Practical Exercises ; 學員進行實機練習
12:45 - 13:00 (15 mins 分鐘)	Part 4 : Examination 第四部分：考核 Examination for the Course Content ; 對課程內容進行考核
13:00	Finish 結束