I. General:	**壹 一般:**
1.1 Gasoline Dispenser shall be equipped with a Vapor Recovery Monitoring System (VRMS) or call Inline-System-Detection (ISD) and in this specification we call VR monitoring system.	1.1 汽油加油機須配備油氣回收監測系統(VRMS)或者稱為內部系統連接檢測(ISD)，簡稱 VR 監測系統。
1.2 The vapor recovery monitoring system shall be a model listed by U.L-971 &(CARB-CP201) or certified by a notified body under European ATEX-2014/34/EU or German TUV-21.BimSchV for use in hazardous area of potentially explosive gas atmospheres.	1.2 在線監測系統須經美國保險業者實驗室公司 U.L-971 & (CARB-CP201)載錄或經歐盟(ATEX-2014/34/EU) 或德國(TUV-21.BimSchV)認證，適合使用於有潛在爆炸性氣體環境之危險區域。
1.3 The system must Suitable to measure stage II Vapor Recovery System (VRS) in gas-station	1.3 該系統必須適用連接於各加油站之第二階段油氣回收系統(VRS)。
1.4 Each Gasoline dispenser shall equipped with VR monitoring system correspondingly each fueling nozzle and data shall be combined intergrading with a centralized monitoring console. The system shall automatically calculate each refueling transaction of vapor recovery ratio (vapor volume/ Liquid volume ratio= A/L ratio). The data correctness must be within±5% error value.	1.4 每台汽油加油機內部須安裝油氣回收在線上監測與加油中油槍相對應套件，其數據並須搭配連結中央式監控主機統計。該系統須自動計算每筆加油交易之油氣回收比率(油槍抽氣量/加油量比率=A/L 比)，資料正確性須在±5%誤差值內。
1.5 The System shall also detect and monitor pressure on vapor recovery return-line to gasoline tanks and data shall be displayed on the system Console Installed in the station.	1.5 系統須能監測及顯示油槽壓力，數據應顯示在加油站的監控主機上。
1.6 The system Must enable detecting any type of unleaded gasoline's refueling vehicles included any type of motorcycle or scooter.	1.6 系統必須能夠檢測任何類型的汽油加油車輛，包含摩托車或速克達。

1.7 VR monitoring system console hardware specification: a. Equipment composition: console, data collector, vapor flow sensor (including filter), relay, power supply and RS485 connection card b. Colorful display, touch screen c. The console shall enable read,monitor ,adjust and controlled remotely via the network (Ethernet, wireless network and 4G). d. Alarm function e. Available to connect 10 sets (20 sides) or more dispenser VR monitoring system	1.7 VR 監控系統主機硬體規格： a. 設備組成:站內主機、數據收集器、油氣流量感應器(含濾網)、繼電器、電源供應器及 RS485 連接卡 b. 彩色、觸控顯示幕 c. 主機須能透過網路可與遠端連線讀取、監控、調適和控制(乙太網路、無線網路及 4G) d. 警示功能 e. 可連結 10 台(20 面)或以上加油機油氣回收設備在線監測套件
1.8 Technical requirement: System's Vapor flow sensors installed on the dispenser shall be ATEX certified suitable for zone 0 and approved by TUV or equivalent notified body according to 21.BimSchV.	1.8 技術要求: 安裝在加油機上的油氣回收傳感器應通過 ATEX 認證並適用於 ZONE 0 區，且由 TUV 或者其他根據 21.BimSchV 的認證機構核准。
II. Technical Metrical requirements:	**II. 技術指標要求**
2.1 During normal gasoline dispenser fueling operation with a minimum delivery of 3 liters at a minimum flow rate of 15 liters/min the SYSTEM Calculated Vapor Recovery Efficiency is below 0.88 or exceed 1.20, error shall be detected ,pre-warn and recoded.	2.1 在正常的汽油加油機加油操作期間，最小的輸送量為 3 公升，最小流量為 15 公升/分鐘，當系統偵測計算的油氣回收比率低於 0.88 或者高於 1.20 時，並應須進行預警並記錄錯誤。
2.2 In case error is detected for ten successive deliveries in VR system , the condition shall be through VR monitor system upload to alarmed and displayed on console. The warning, alarm information must send via console system or through POS in station.	2.2 如果在線監測系統偵測到油氣回收系統連續 10 次預警錯誤，此狀況必須即時上傳站上主機，並發出警報和顯示於系統主機畫面。而警告必須透過加油站的監測主機系統程式或透過連接 POS 系統進行通知。
2.3 System installed on the dispenser shall	2.3 安裝在加油機上的系統必須同

	monitor simultaneously on both fuling sides and automatically detects the extracted nozzle signal and transfer data to system Console installed in the Station.		時監測兩面的加油,並自動偵測提槍訊號及蒐集數據傳輸連接到站上的監測系統主機中。
2.4	The System shall be connected to a pressure transducer and installed on suitable location of the station to continuous monitor vapor's pressure and when exceeding the +3 to -8 inches of water column, the value inside the gasoline's tanks shall provide warning and alarms.	2.4	系統應須安裝壓力傳感器，並安裝在適當地點得以即時連續偵測和監控因油氣 vs.油內槽壓的壓力變化，如油槽內的油氣壓力超過範圍+3 至-8 英吋水柱時，並須提供警告和警報。
	III. Basic definition:		**III. 基本定義:**
	All VR on-line detection monitory system must installed inside of dispensers.		所有的 VR 在監測系統都需安裝在加油機內部。
3.1	The pressure transducer sensor on vapor recovery return-line to gasoline tanks shall be connected via a serial data line to a Console (VR detecting system) to be installed in the Gas Station.	3.1	壓力傳感器於油氣回收管和汽油槽是利用串連數據的方式連接到加油站的主機上(VR 監測系統)。
3.2	This Console shall installed in the Station Office should collect real time data of any delivery, vapor recovery efficiency, status of each dispenser and historical alarm log of the gasoline station.	3.2	主機應安裝在加油機的辦公室內，必須即時收集每一筆汽油加油時的數據資料、油氣回收率、每台加油機的狀態和油氣回收系統的歷史警報日誌。
3.3	The VRMS system shall be able to storage data of minimum two-thousands 2000) delivery on circular memory, it must have a display that allows real-time display of the gasoline delivered, the vapor recovered and the flow rate of both sides of each fuel dispenser.	3.3	VR 在線監測系統,須應有循環記憶體，且能夠將資料至少儲存兩千筆交易，須具備螢幕顯示器，數據資料須呈現每一台加油機每一面加油時之即時的加油數據、油氣回收比率。
3.4	All data so collected shall be also downloaded and/or transferred via	3.4	所有數據都可透過 LAN 上傳或下載連接至異地遠端系統。

LAN to a remote location.