Blue Hydrogen for Fuel Cell

Vadilal Chemicals Ltd. (VCL) is a leading manufacturer and supplier of a wide range of *Industrial and Specialty Gases and Gas mixtures, Ultra high purity gases, Calibration gases, Rare Gases and Gas handling instruments in India.*

Safety, quality, customer satisfaction and innovation have been the guiding stones during our journey towards excellence and our strength lies in our **strong sales and distribution network comprises of 7 bottling plants & 3 SBU's** spread along Western, Northern and Southern part of India. Our plants & centers are equipped with sophisticated instruments, skilled manpower and adequate transport vehicles, enjoying goodwill of over **3000 active customers**.

We are one of the leading suppliers of *Hydrogen (2,00,000 m3/month)* where we are constantly investing in network of *H2 Banks (Installed Capacity of 40,000 m3/day)* & dedicated more than *10,000 cylinders exclusively for H2*. We are also very proud to highlight that we are the ***ONLY CCOE (Chief Controller of Explosives) Licensed Hydrogen Refilling Facility*** in India that could be replicated across India for Telecom Companies. Currently we source our Hydrogen from *3 continuous producer-suppliers of Hydrogen (Chlor-alkali plants)*.

With the help of Geotrackers "***Tracking Solution***", Vadilal can now leverage GPS location technology that helps track & monitor vehicles helping the stakeholders to better understand and track every movement of the vehicle and closely monitor on-time delivery & over-speeding safety issues.

gas-consuming process unit, e.g. a fuel cell that can be monitored remotely. This system collects data generated from delivery systems such as Quad pressure, gas flow, auto-switchover status & Quad replacement status, which help the system to enhance safety & generate reports including mean-time-to-failure reports, serviceability, comparisons among sites, thus saving time and helping to minimize future downtime of the gas delivery system.

Our ***Gas Delivery System*** uses a multiplicity of gas Quads, wherein one Quad is in active gas dispensing mode and supplying gas to the flow circuitry of the panel. During the active gas dispensing operation in such panel when pressure reduces, a second gas Quad of the system is activated to permit switching to the second source of the sub-atmospheric pressure gas coupled to the first gas Quad without the occurrence of pressure spikes or flow perturbations. Due to the sensitivity of the operation and flammability of the H2 gas all are electrical equipment are flameproof adhering to CCOE norms.

Schematic for remote H2 Gas Switchover system and Remote Alarms and Analysis system