

PALM OIL LEAK DETECTION & MONITORING

PALM OIL LEAK DETECTION

Palm oil is extracted from palm fruits and is the most widely produced oil in tropical areas. Palm oil is very popular as an edible oil and as biofuel. Malaysia and Indonesia together produce over 80% of palm oil global supply. Palm oil is economical since it produces up to 10 times more oil per unit area than other plants such as soybeans. Oil palms produce 38% of the world's vegetable-oil output on 5% of the world's vegetable-oil farmland. Palm oil is an economical replacement to other high trans-fat content oils. Demand for palm oil has been rising and is expected to climb further, with many food and cosmetics industrial manufacturers consuming palm oil. Therefore, this industry will not disappear albeit social and environmental concerns, such as release of pollutants to the environment.



Leakwise can help in mass production industry of palm oil: processing, refining and transportation phases.

After steaming and crushing the Fresh Fruit Bunches, solid waste and water is cleared and separated from the Crude Palm Oil by means of a centrifuge. The wastewater can't be released to public water before verifying that there is no oil in them. A gravity oil separator should be installed before the wastewater is released from a tank or sump; this is the first point where a Leakwise sensor can be beneficial. Refining is the next stage of Crude Palm Oil processing, where oil leaks can occur. Palm kernels are screw-pressed to produce 66% oil, 24% water and 10% solids. Again, this significant percentage of wastewater must be monitored before being released to public water. The clarification stage of the produced oil involves dilution with water, then storage in settling tanks. The top oil is skimmed and sent to a centrifuge and vacuum drying, then the oil is stored in tanks. Water content in the oil is about 0.1%, but oil content in the large amounts of process water may be much higher. Therefore, during this stage process water must be monitored before being released.

The complete production floor should be monitored by a Leakwise sensor for leaks which may occur in pipes, flanges, valves and tanks. Leaking oil on production floors is a safety hazard, and an environmental concern when being washed away by runoff water.

Storage tanks, loading / unloading decks and terminals are additional places to monitor oil leaks with Leakwise.

