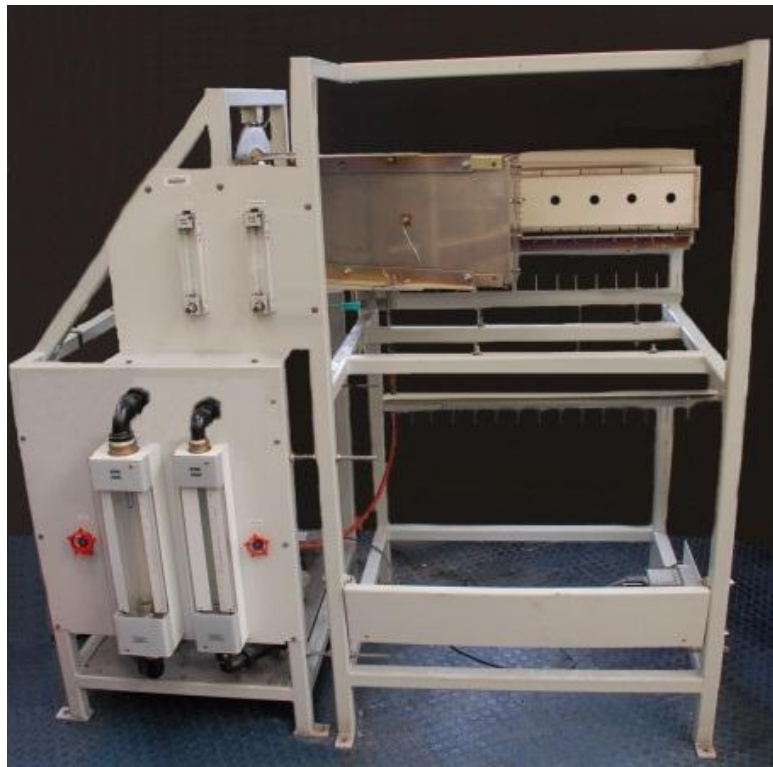


SPREAD OF FLAMES APPARATUS (ISO 5658 AND IMO/LIFT)

IMO LATERAL IGNITION AND FLAME SPREAD TEST/SPREAD OF FLAME APPARATUS ISO 5658

Measures ignitability, flame spread and heat release using a scientifically designed fire scenario, capable of providing meaningful data for performance based design.



The LIFT or Spread of Flame apparatus measures the lateral spread of flame along the surface of a material or product, vertically orientated, in response to radiative heat in the presence of a pilot flame. It provides data suitable for comparing the performance of essentially flat materials, composites or assemblies, which are used primarily as the exposed surfaces of walls. It is one of the best methods for the determination of fundamental fire properties relating to flame spread. Some profiled products (such as pipes) can also be tested under specified mounting and fixing conditions. The complete test apparatus consists essentially of three main components, a radiant panel support framework and a specimen support framework which are linked together to bring the test specimen into the required configuration in relation to the radiant panel, and the specimen holder, which carries the test specimen.

Following ignition, any flame front which develops is noted and the progression of the flame front horizontally along the length of the specimen is recorded. The results are expressed in terms of the flame spread distance/time history, the flame front velocity versus heat flux, the critical heat flux at extinguishment and the average heat for sustained burning. The results of this test method are

potentially useful to predict the time to ignition (tig), and the velocity of lateral flame spread on a vertical surface under a specified external flux without forced lateral airflow. Data are reported for convenient use in current fire growth models.