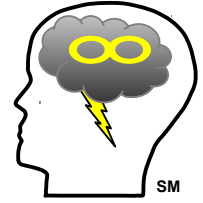


# An auto-extinguishing floating-oil-platform fire design

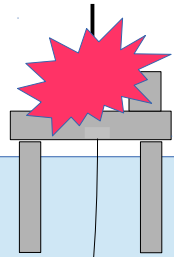
## A Communication of the Intractable Studies Institute

Patrick M. Rael, Director, [IntractableStudiesInstitute.org](http://IntractableStudiesInstitute.org)



Floating oil platform fires can be difficult to extinguish using techniques such as water hoses. An explosion may precede the fire which can disable all platform operating machinery, and can even kill all personnel leaving nobody to fight the fire. Although external ships can approach the platform and spray water, as was evident in the BP oil platform catastrophe, even several ships were insufficient to put out the blaze and the platform sank. It should be noted that once the platform was under water, the fire is out on the platform. Some surface fire can remain but is easier to extinguish because it is planar on the surface of the water and foam is very effective there. A design for an oil platform that can robustly handle any fire on it would allow the entire oil platform to submerge automatically in the case of a fire (unless personnel hit the submerge-override switch). It is important for the submerge operation to initiate automatically in a fire and not under human control since all platform workers could be dead from the blast. Foam is created on the surface automatically to put out any surface fire. Once submerged, a robust mechanism not dependent on power then flips and the platform rises back to the surface. Although water-damaged, the oil platform survives. The cost of the 2010 Gulf of Mexico spill: +40B.

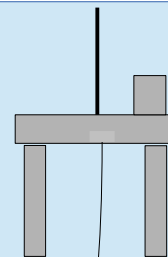
Oil platform is on fire.  
Submerge initiates  
automatically in 1 minute  
unless overridden.



1



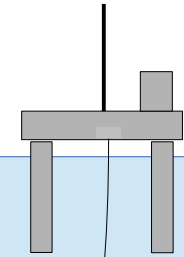
Oil platform is submerged. Fire is  
extinguished by ocean. Re-surface  
operation is initiated automatically  
without human intervention.



2



Oil platform is  
back on surface,  
Some damage  
but it is saved.



3

Ocean