Equivalent Safety Finding to CS 27.995 (d) amendment 3, dated 11 December 2012

Introductory Note:
The hereby-presented Equivalent Safety Finding has been classified as an important Equivalent Safety Finding and as such shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) of which states:

"*2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency.*"

This ESF has been subject to public consultation and no comments have been received by EASA.

Statement of Issue:
The sub-paragraph (d) of the paragraph 27.995 **Fuel valves** of the CS-27 reads:
"*(d) No shut-off valve may be on the engine side of any firewall*".

Within some installation of fuel shut-off valves the fuel shut-off valve is mounted to the firewall with the main body on the external side of the firewall with a part of the valve protruding in the designated fire zone.

Discussion:
This is subject to a TCCA Equivalent Level of Safety (ELOS) Issue Paper.

The function of the fuel shut-off valve is to shut-off the fuel flow to the fire zone in the event of an emergency powerplant fire condition.

Under any fire condition in the Designated Fire Zone, the operation of the shut-off valve when subject to fire conditions is to be maintained for the first 5 minutes, and remain in closed position for at least the 10 following minutes.

EASA Safety Equivalency Demonstration:
The fuel shut-off valve shall be submitted to a fire test for 15 minutes as defined in AC 20-135 or ISO 2685. The fuel shut-off valve shall be installed in a representative environment.
The valve is to remain operative in the open position without any leakage for 5 minutes. After 5 minutes the valve shall be closed. The valve in the closed position is to be demonstrated without any internal or external leakage for the 10 subsequent minutes.