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(54) Title: SIGNAL CONNECTOR SYSTEM

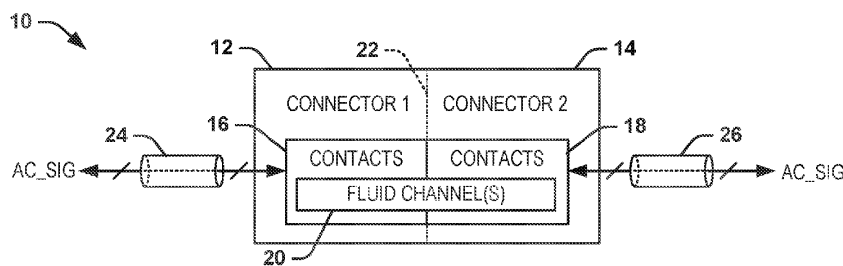


FIG. 1

(57) Abstract: One example includes a signal connector system. The system includes a first connector comprising a first housing and first contacts formed from a self-passivating transition metal and configured to conduct an AC signal. The system also includes a second connector comprising a second housing and second contacts formed from the self-passivating transition metal and configured to electrically couple to a respective one of the first contacts to conduct the AC signal. The first and second housings can be coupled to enclose the signal connector and to create at least one fluid-filled channel between each of the electrically-connected first and second contact pairs in response to fastening the first and second connectors while submerged in a respective fluid to provide a resistive path in the at least one fluid-filled channel for providing signal isolation between each of the electrically-connected first and second contact pairs.

[Continued on next page]

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