

CENTRE FOR JOINT WARFARE STUDIES



CENJOWS

CHINESE STEALTH TRANSPORT UAV: FL2

1. **China Building World's Largest Manned Submersible.** China has completed the construction of a manned cabin for a new deep-sea manned submersible, which would be capable of carrying three persons deeper than 10,000 m. There are three observation windows on the spherical shell of the manned cabin. The one on front side is main driving window, while the remaining two on both sides are for general observations. After the crew enters the cabin from the top, the hatch cover gets closed, making the spherical shell completely enclosed. The shell will be the only activity space for crew members. With a diameter of less than two meters, the crew can only squat or sit in the cabin. Further work, including the installation and integration of devices in and outside the cabin is being progressed.



Manned cabin for a new deep-sea manned submersible

2. **Comments.** The cabin made of titanium alloy is the core component of the deep-sea manned submersible, and has reportedly passed through hydrostatic pressure-test and has received approval for the integration into the submersible unit. The submersible was developed and built after a second-generation 'Rainbow Fish'

vehicle reached a depth of more than 10,900 meters in 2018. When this submersible gets completed, it will be able to go deeper down into Mariana Trench in the Pacific Ocean, than the Chinese existing manned submersible 'Jiaolong' which achieved a diving depth of 7062 m in Jun 2012. It will enable China to carry out scientific research in the hithertofore unexplored deepest sea areas. With this breakthrough, China will be capable of exploring more than 99.8 percent of the ocean areas.

Source: <http://www.chinadaily.com.cn/a/201910/29/WS5db7f4d6a310cf3e35574421.html>

3. **China Developing a Stealth Transport UAV (FL-2).** A Chinese company, Zhong Tian Guide Control Technology Co Ltd, showcased an under-development stealth transport UAV named FL-2, which incorporates a mix of conventional and flying wing design. Using two turbofan engines, the FL-2 reportedly has a liftoff weight of 22 tons, ceiling of 15 km, cruise speed of 600 to 780 km per hour, max speed of 900 km per hour, range of 7,000 km and an endurance of 10 hours. It will be able to carry up to six tons of cargo. The aircraft has a flying wing aerodynamic design similar to the US' X-47B drone, but also has a pair of conventional V-shaped vertical tails. Its fuselage also seems bulkier than other typical flying wing aircraft like the B-2 bomber.



Model of FL-2 transport UAV on display at a military-civilian equipment and technology expo in Xi'an

4. **Comments.** The FL-2 is still in its conceptual design stage and is being developed as a long range multipurpose high-subsonic unmanned transport platform. The FL-2 UAV has multiple cabins for carrying different types of cargo, but can be also reorganised to carry a single large object. This hybrid wing design could represent a trend for future large transport aircraft. Also, multiple Chinese flying-wing aircraft projects like GJ-11, Sky Hawk and CH-7 have been running for some time, and are beginning to yield results. However, these are all reconnaissance and attack UAVs.

5. Flying-wing usually means the plane has lower drag force while flying and has more space within its cabins, giving the aircraft more load capacity. The FL-2 could serve as an important technical demonstrator for China's next generation transport plane.

Source: <http://www.globaltimes.cn/content/1168070.shtml>