



CENJOWS

CHINESE SOLAR POWER UNMANNED AIRCRAFT AND ICEBREAKING VEHICLE

1. **China-Made Solar-Powered Unmanned Aircraft Makes Maiden Flight.**



"MOZI 2" solar-powered unmanned aircraft on its maiden flight

China-developed solar-powered unmanned aircraft "MOZI 2" has completed a successful maiden flight, on 27 July 19. The flight was conducted at an airport in Deqing County in Zhejiang Province. The UAV, designed with a wingspan of 15 meters and solely powered by solar cells, can fly up to a maximum altitude of 8,000 meters. It can cruise at a low speed for up to 12 hours during the night after charging in the sunlight for eight hours. The aircraft is expected to be used for disaster relief, reconnaissance and communication. Manufacturers of this UAV seek to work with 5G service providers to further expand the applications of this UAV.

2. **Comments.** China has a very robust UAV industrial complex, both in the public and private industrial bases. UAVs from micro to very large sizes, capable of carrying out broad spectrum of activities - from mundane civil applications to long endurance jet powered military attack variants - are all being produced in China. It is also exporting military usage UAVs to Pakistan and many other countries.

Source: <http://en.people.cn/n3/2019/0731/c90000-9601911.html>

3. **China Delivers First Self-Built Icebreaking Research Vessel.** The first self-developed icebreaking research vessel of China – Xuelong 2 (Snow Dragon 2) was delivered to the Polar Research Institute of China on 11 July 2019, the Maritime Day of China. Compared with its predecessor Snow Dragon, the Snow Dragon 2 is equipped with two-way icebreaking technology – the first of its kind in the world, and is able to continuously break ice as thick as 1.5 meters - with 0.2 meters of snow on top - at speeds of 2 to 3 knots.



In order to break thick ice layers, 'Xuelong 2' is built with special steel, measuring 100 millimeters at the thickest points. In addition, a total of over 7,000 smart sensors are installed in the body and equipment of the expedition vessel, which enables 'Xuelong 2' to monitor and collect extensive data on ice.

4. **Comments.** The icebreaking vessel is a result of Chinese collaboration with foreign companies. The basic design was provided by Finland's Aker Arctic Technology, but Chinese institutes and enterprises also had an in-depth participation during its building.

5. The research vessel which is expected to proceed to both, the Antarctic and Arctic this year for expedition, will improve China's capability to conduct scientific investigations in the Polar Regions. In coordination with the 'Xuelong-1', it will greatly expand the coverage and duration of Chinese polar expeditions. The idea to build a new polar expedition vessel originated in 2008 when Chinese scientists found the 'Xuelong-1' was not able to meet the demand of investigations. Though vessel-based scientific expeditions to Antarctica were mostly conducted in summer, global expedition teams still couldn't get through the ice shelf regions due to limited icebreaking capability.

Source: <http://en.people.cn/n3/2019/0712/c90000-9596658.html>