Twitter Thread by Fabian Hinz

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A quick thread on the Tondar 69, a missile that is often forgotten but played an important role in Iranian missile development.



Like so much of Iran's missile program, the history of the Tondar 69 goes back to the Iran-Iraq war when the Iranians were seeking ballistic missiles from a variety of sources. Among them were the Soviet Union and Syria, both of which rebuffed their requests for Scuds.

Libya and the DPRK proved more cooperative but there was also a third country willing to sell ballistic missiles to Tehran – China. For reasons of secrecy, negotiations with the Chinese were held in Thailand and on the Iranian side they included both Moghaddam and Vahid Dastjerdi

At first, the Iranians wanted a missile with a range of 300km but were surprised to learn that despite having ICBMs, the Chinese had no such system. Chinese officials told them to look at a map of China to see why. They simply had no need for such ranges.

However, there was one missile they could offer: the B610 (CSS-8), a ground-to ground version of the HQ-2 surface-to-air-missile which itself was a Chinese copy of the Soviet SA-2. Originally, the missile had a range of merely 125km.

The Iranians explicitly wanted to use the missile for striking Baghdad and 125km wasn't enough. So an agreement was made for the Chinese to increase range to 150km which would make it capable of reaching the Iraqi capital even if only from a small part of Iran.

One of the reasons, the Iranians were so interested in the missile was its improved accuracy over the Scud. According to the Iranian sources, with an accuracy of about 250m, the missile could have made a real difference in the war.

However, it didn't arrive in time. Whether this was due to technical limitations or a Chinese reluctance to provide the means of striking the capital of Iraq (to which it also sold substantial amounts of weaponry) remains unknown.

The B610 missiles finally arrived in the Iranian year 1369 (1990/91) and for this reason the Iranians decided to name them Tondar 69 (Thunder 69). @SirajAHashmi



This could have been the whole, rather uneventful story of the Tondar 69 if it wasn't for another system the Iranians had developed: the Zelzal series of long-range artillery rockets. Artillery rockets don't use any guidance which works okish for shorter ranges.



However, the Zelzal was a really long-range artillery rocket with some versions having a range of up to 250km. A CEP of <5% of range in this case would mean about 12.5km which is a truly atrocious level of accuracy.

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SPECIFICATIONS

TYPE	ZELZAL 3-B ROCKET
Max. Range (km):	250
Min. Range (km):	235
Length (mm):	9,000
Diameter (mm):	616
Initial Weight (kg):	3,600
Warhead Weight (kg):	600
C.E.P:	<5% Max.Range
Average Action Time (sec):	20
Specific Impulse (sec):	240
Propellant Weight (kg):	1,950
Type of Propellant:	Solid (HTPB)
Service Life (Years):	7



So the Iranians had an idea. Why not stick the guidance system of the Tondar 69 on top of a Zelzal and add some control fins? This would combine the accuracy of the Tondar with the longer range of the Zelzal and its advantage of being both road-mobile and all solid-fuel.

And this is how the Fateh 110 emerged in the late 1990s. This design would give birth to a whole class of missiles whose development continues to this day.



Of course, considering the massive advances in accuracy and range, the Fateh class missiles of today (like the Zolfaghar and Dezful) probably have little to nothing in common with their ancestor anymore except their general outside appearance.



Finally, there is another angle to the whole story. In their war against the Saudi-led coalition, the Houthis have converted old Yemeni SA-2 into surface to surface missiles and have used them extensively against Saudi border towns.



Whether these systems, dubber Qaher 1 and Qaher 2M by the Houthis, benefitted from Iranian assistance and the transfer of Tondar 69 technology remains unknown, but it's quite likely.


المسيرة
قاهر 1
قاهر 1
الإعلام الحربي
صاروخ قاهر 1
- يعمل على مرحلتين بالوقود الصلب والسائل
- طوله 11 متر

End.