



## Suspicious Advertisements for High Quality Maraging Steel

### The question of Electrovek Steel's Farsi language web site

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The Ukraine-based company, Electrovek Steel (<http://www.evek.biz/>), advertises for sale a wide range of metals, including high grade maraging steel, which is tightly controlled for export because of its application in gas centrifuges and ballistic missiles.

Electrovek has translated its web site into several languages. One of these translations is the focus of this report. The company created a web site in Farsi, hosted in the United Arab Emirates (UAE), which advertised for sale high grade maraging steel, including U.S.-made Vascomax C300 and C350 maraging steel. ISIS accessed the web site in August 2013. However, by January 2014 the web site had been removed. The company had no comment in a request for clarification about the Farsi language web pages.

High quality maraging steel is subject to national trade control laws and, with regard to Iran, sanctions imposed by the United States and the European Union and more broadly contained in the United Nations Security Council resolutions. These laws and regulations make the sale of this maraging steel to Iran either illegal or subject to extraordinarily strict trade control restrictions.

Although Electrovek is a Ukraine-based company, it also maintains offices and warehouses in Russia.<sup>1</sup> It also appears to have virtual offices in several countries, including the United Kingdom and the United States. According to its web site, the company exports goods to more than 20 countries worldwide.

Before Electrovek's Farsi language web site was removed, its presence attracted attention in Iran and may have resulted in Iranian customers. It is possible that Electrovek was involved in a government sting operation aimed at luring Iranian customers. No evidence of this being the case has emerged since last summer when ISIS began investigating the web site.

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<sup>1</sup> ISIS could not determine the ownership of Electrovek from its web site or English language internet searches. A company contact web page lists a Moscow office as a "HQ," which could mean headquarters. But whether it is owned by a Ukrainian or Russian entity is unknown.

Whether Electrovek sold any sensitive or banned goods to Iran is unknown. However, the former Farsi language web site justifies further scrutiny of Electrovek's sales and activities.

## Iran's Maraging Steel Requirements

Maraging steel is a specialty steel known for superior strength and machinability. It is used in high speed gas centrifuge rotors, solid rocket motor cases, and propellant tanks.

Iran requires maraging steel in its gas centrifuge and missile programs. In the past, Iran is known to have acquired large amounts of grade 300 or 350 maraging steel from abroad for use in its IR-1 centrifuges, specifically for use in the bellows of the rotor assembly (see Figure 1 and footnote).<sup>2</sup> Its more advanced IR-2m centrifuge also has a bellows made from high grade maraging steel.

Iran has been recently implicated in illegal efforts to acquire maraging steel. In 2009, Iranian front organizations, with the support of Chinese illicit procurement agents, purchased this material to be used for long-range missiles, including 24,500 kilograms of maraging steel rods.<sup>3</sup> The U.S. Department of the Treasury designated one Chinese individual, Karl Lee, and six Iranian entities under Executive Order 13382, for their connection to Iran's missile proliferation network.<sup>4</sup> More recently, in July 2012 a U.S. sting operation successfully netted Parvis Khaki, the director of an illicit nuclear procurement network that smuggled U.S. and EU-origin material through China to Iran.<sup>5</sup> Khaki sought to transport 20 tons of maraging steel C-350 to Iran.

Iran is not believed to be able to make adequate maraging steel for its nuclear and missile programs and is likely continuing to seek external sources of maraging steel. Thus, a web site in Farsi advertising the availability of high quality, tightly controlled maraging steel raises particular concern.

## Electrovek's Suspicious Web Pages

Electrovek Steel advertises that it sells maraging steel of various grades: 250, 300, and 350.<sup>6</sup> Figures 2, 3, and 4 show Electrovek web pages in Farsi, including two that explicitly advertised the sale of

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<sup>2</sup> See for example, "7th of Tir Industries (Seventh of Tir, Haft e Tir or Haftom e Tir Industries)" ISIS NuclearIran web site. <http://www.isisnucleariran.org/sites/detail/7th-of-tir/>

<sup>3</sup> Statement of Hon. Robert M. Morgenthau, former District Attorney, New York County, "Engaging Iran: Obstacles and Opportunities," May 6, 2009, <http://www.gpo.gov/fdsys/pkg/CHRG-111shrg52971/html/CHRG-111shrg52971.htm>

<sup>4</sup> Department of Treasury, "Treasury Designates Iranian Proliferation Network and Identifies New Aliases," April 7, 2009, <http://www.treasury.gov/press-center/press-releases/Pages/tg84.aspx>

<sup>5</sup> David Albright and Andrea Stricker, "Major U.S. Sting Operation Arrests Iranian in Nuclear Smuggling Network," ISIS, August 12, 2012.

[http://isisonline.org/uploads/isisreports/documents/US\\_case\\_gas\\_centrifuge\\_equipment.pdf](http://isisonline.org/uploads/isisreports/documents/US_case_gas_centrifuge_equipment.pdf).

<sup>6</sup> <http://www.evek.biz/maraging-250.html>, <http://www.evek.biz/maraging-300.html> and <http://www.evek.biz/maraging-350.html>. ISIS staff accessed these pages in mid-2013, but they have since been removed.

Vascomax C300 and C350 maraging steel, a well-known, high quality U.S. brand made by Teledyne Vasco.

The history and readership of at least one of these pages can be outlined using web tracking sites. After February 2012,<sup>7</sup> Electrovek operated the web site “evek.ae,” which had a specific web page advertising grade 300 maraging steel in Farsi (<http://www.evek.ae/maraging-300.html>). The domain “.ae” is associated with the UAE, however, according to a web site that stores URL data,<sup>8</sup> 100% of viewer traffic for this Electrovek site originated from Iran.

Other sites held by Electrovek, including “evek.fr” (French) and “evek.es” (Spanish) correspond in language with the country domain suffixes. Therefore, “evek.ae” should appear in Arabic, not Farsi, to correspond with the UAE. Electrovek also did not advertise the existence of this web site like the others in different languages. The main web site did not list a company contact in the UAE or the Farsi site in its list of web sites in other languages. This raises questions regarding Electrovek’s intentions for creating the Farsi language site.

In the summer of 2013, ISIS requested a U.S. export compliance manager for a large metals seller to review Electrovek’s English language web site. The export manager indicated that he was skeptical of the site because it did not appear to be a typical metals web site.

If Electrovek did sell maraging steel to Iran, it could have been in violation of national and international laws, including UN Security Council sanctions on goods used in Iran’s nuclear and ballistic missile programs. ISIS has no information indicating that Electrovek Steel did in fact sell grade 250, 300, or 350 maraging steel to Iran. The web site in Farsi ostensibly frequented by viewers in Iran, under a UAE domain name, does elicit questions about a potential sale or at least attempts to sell banned goods to Iran. Supplier countries, particularly the United States, should check if any of their exports ended up at Electrovek and scrutinize the fate of any such exports. They should also search for any re-exports involving Electrovek to countries such as the UAE and Malaysia, which Iran has frequently used as transshipment points to camouflage its illegal procurement efforts.

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<sup>7</sup> The “Wayback Machine” shows snapshots of web sites that no longer exist. The only snapshots that are available for this website are between February 2012 and August 2013.

<sup>8</sup> Dig Site Value, <http://getdigsitevalue.com/s/evek.ae> .



**Figure 1.** This image shows at least three Iranian centrifuges and bellows at a recent Atomic Energy Organization of Iran exhibition in Tehran. The centrifuges on the far left and far right appear to be IR-2m centrifuges, each of which has a rotor assembly with two carbon fiber rotors (black) connected by a thin maraging steel bellow. The IR-2m bellows are believed to be made from 350 maraging steel. The tall centrifuges in the middle are IR-1 centrifuges, each of which has a rotor assembly made from four high-strength aluminum rotor tubes and three maraging steel bellows. The IR-1 bellows may be made from 300 or 350 maraging steel. The second centrifuge from the left is of an unknown type; some have speculated it is an IR-4 centrifuge.

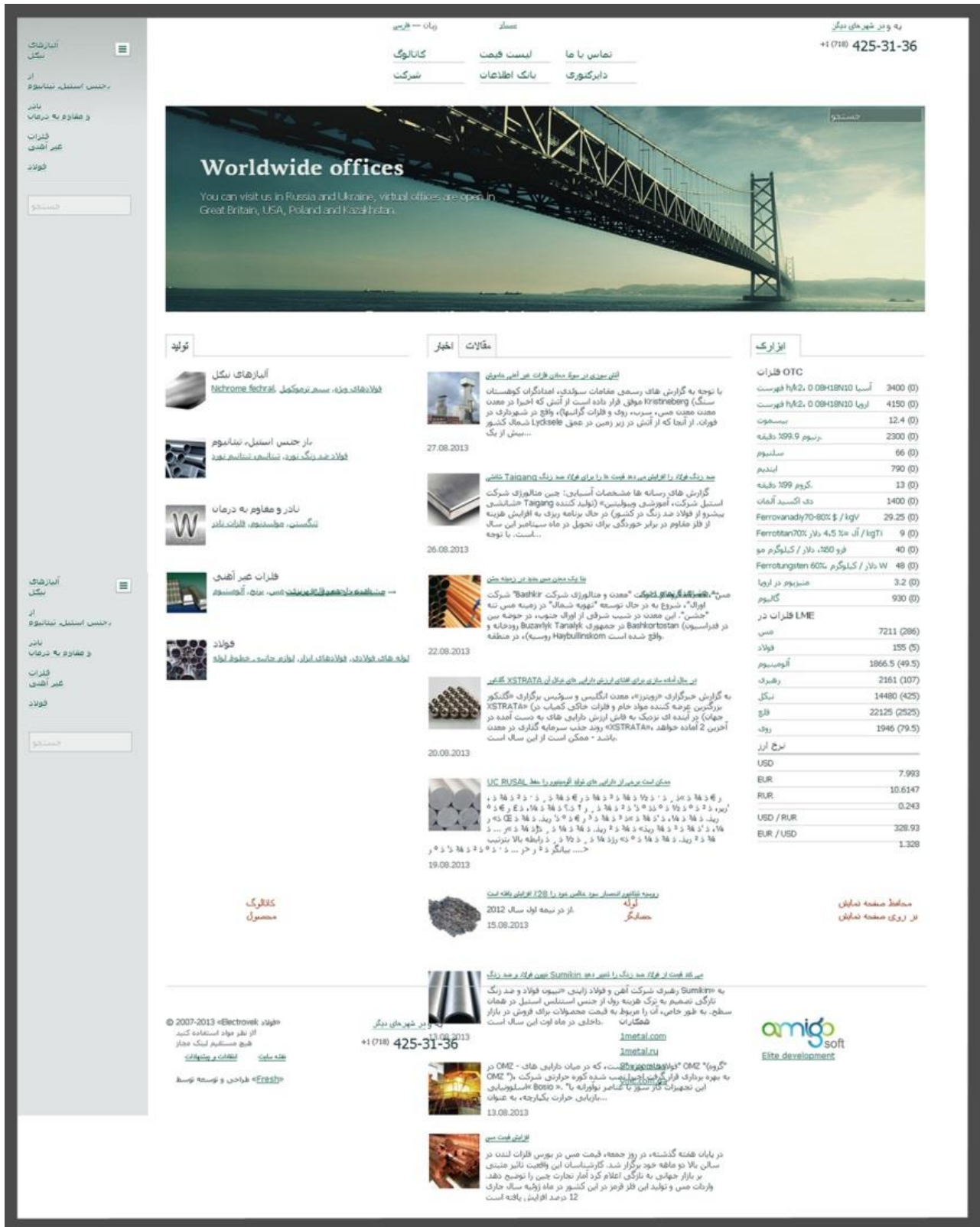
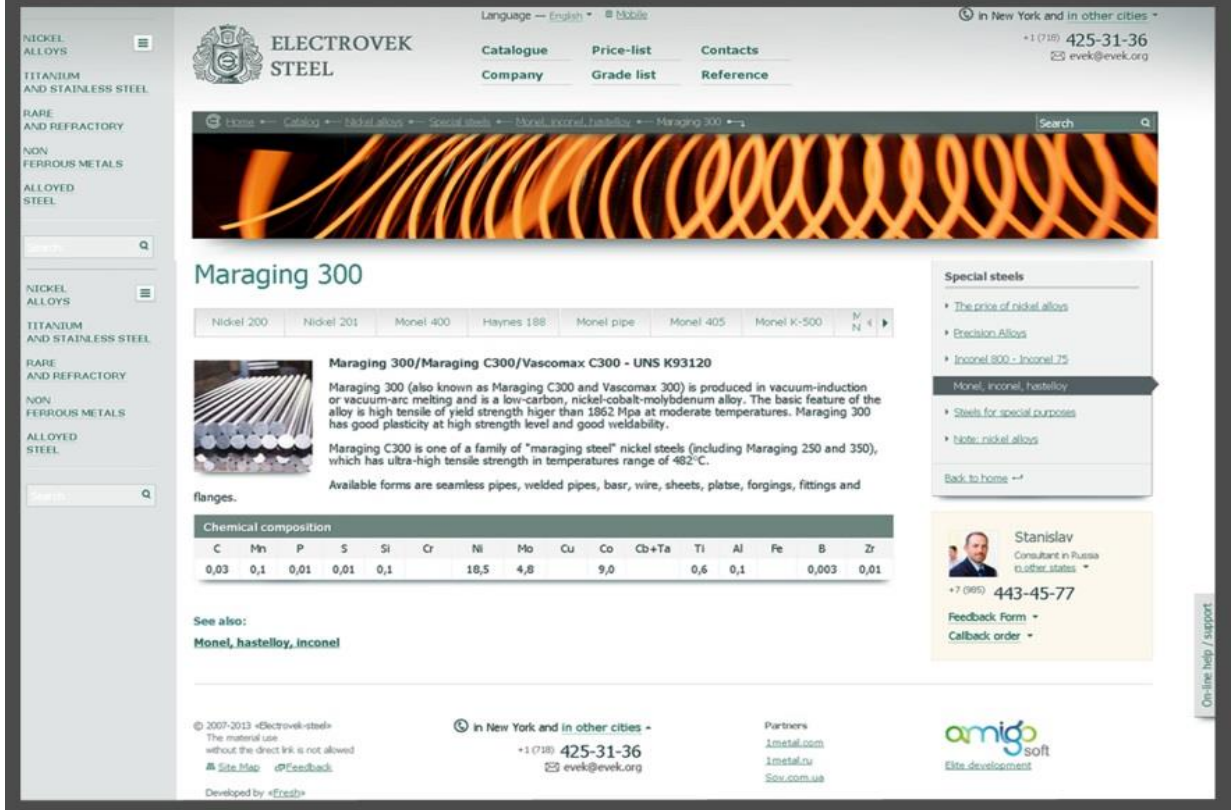
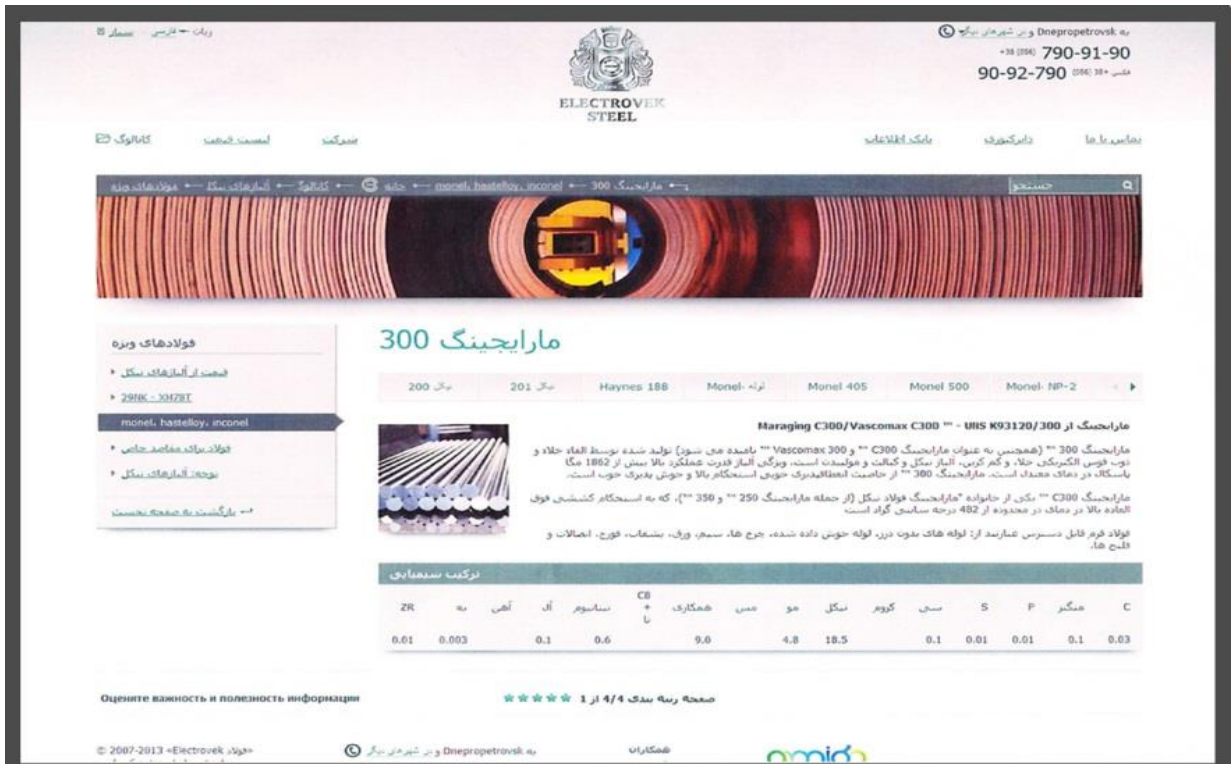


Figure 2. Screenshot of Electrovek’s former Farsi language home page (since removed).





**Figure 3.** The top image is Electrovek’s Farsi language web page advertising the sale of 300 grade maraging steel. Below is its English version.

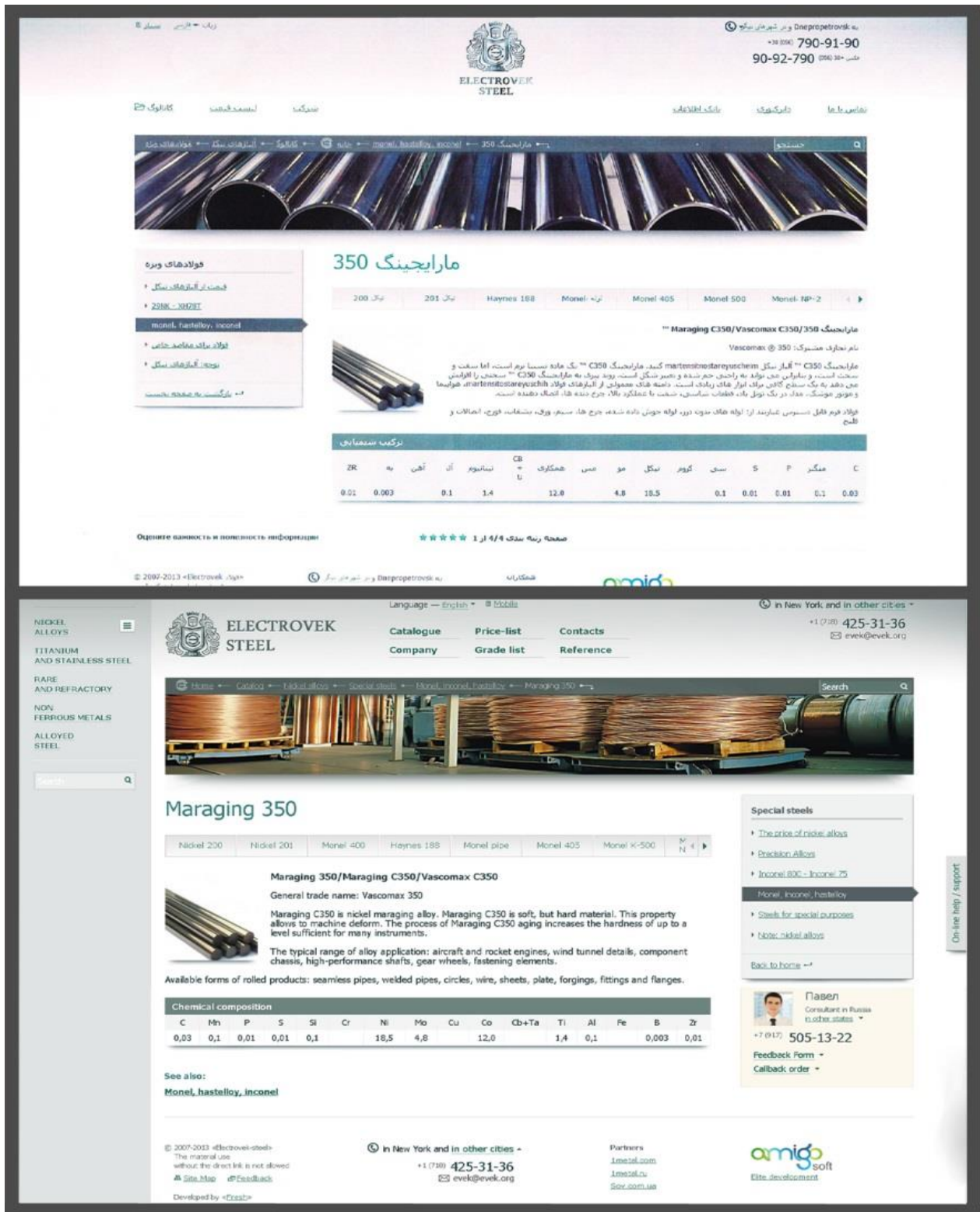


Figure 4. The top image is Electrovek’s Farsi language web page advertising the sale of grade 350 maraging steel. Below is the English version.