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Report

Shipment of a Controlled Vacuum Furnace to North Korea via Multiple States: An HS Code Case Study

By David Albright

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In tracking trade data and trade flows, Harmonized System (HS) codes are routinely used to aid searches for dual-use commodities and to help guide the identification of dual-use items that require a license or greater scrutiny. A recurring concern is shipper falsification of HS codes to evade detection or payment of duties. An illustration of such falsifications is a case we learned about via government sources from around 2022 that involved North Korea and a dual-use vacuum furnace suitable for uranium melting that wound its way from Spain to North Korea, via Mexico, South Africa, and China. Such a furnace is typically controlled under the Nuclear Supplier Group (NSG) Part 2 list and is banned for export to North Korea under United Security Council resolutions.

This type of furnace is a mainstay of a nuclear weapons program, particularly one that uses weapon-grade uranium as the nuclear explosive material, as North Korea is known to do. With North Korea expanding its uranium enrichment program and producing greater quantities of weapon-grade uranium, this new furnace would be especially important.

The Scheme

The shipment of the vacuum furnace to North Korea started in Spain. The original supplier of the furnace is not known, but a trader shipped the vacuum furnace to an entity in Mexico, which, like Spain, is a member of the Nuclear Supplier Group. In the shipping and export documents, this shipper provided an accurate HS code and description. The recipient in Mexico, persons or entity unknown, shipped the furnace onwards to South Africa, but changed the shipping documents. The HS code and description were listed as machinery. In South Africa, the shipper or trader changed the HS code and description to metal scrap and shipped the furnace to China. This change had the added benefit of not requiring a customs tax. From China, it was shipped onward to North Korea.

Discussion and Findings

Both Mexico and South Africa are members of the Nuclear Supplier Group and have more advanced export controls on dual-use items than most countries. However, apparently, North Korea believed it could bypass their controls with this multi-state, coordinated ruse.

Detecting HS code falsification is difficult. Computerized tracking of import and export data can help, but a country would need to have such an operational capability. It is unclear if Mexico or South Africa have such tracking systems, but it is unlikely that they have sophisticated systems such as those in place in the United States or some countries in Europe. For countries such as Mexico or South Africa, tips from intelligence services are invaluable, and South Africa has a track record of acting upon such tips to disrupt illicit trade. However, this case may have been identified after the shipments took place, or European authorities were unable to notify Mexico or South Africa in a timely manner.

For NSG countries, this case highlights the need for checking the end user and later verifying the end use, at least for critical dual-use goods. Such a check by Spain could have uncovered this scheme and even prevented it.

Other measures exist beyond the NSG. United Nations resolution 1718 (2006), paragraph 8, sections A, B, and C, which also applies to NSG Part 2, prohibits member states from providing restricted goods to North Korea directly or indirectly via their vessel, territory, or other means. United Nations Security Council (UNSC) resolutions have developed into blanket bans on certain HS code categories to North Korea.[1] Blanket bans, while necessary, are not a perfect solution and require cooperation and coordinated implementation to be effective, as is evident in the need for countries to monitor cargo shipments and identify falsifications in HS code declarations.

Checking cargo in transit is another way to help thwart such falsifications. Customs entities in transshipment countries would be well-advised to develop risk-based systems to check cargo on a regular basis. Given China's poor record of preventing controlled or UNSC-banned exports from ending up in North Korea, Russia, and other sanctioned countries, any export to China should be presumed suspicious and receive additional scrutiny.

Because HS code falsification is relatively straightforward, national export control agencies should avoid overusing HS Codes to determine the license requirements of shipments of dual-use goods and services. However, HS codes can be helpful in developing risk assessments and are another tool to ferret out trafficking in dual-use goods.

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[1] "Security Council Tightens Sanctions on Democratic People's Republic of Korea, Unanimously Adopting Resolution 2397 (2017)," United Nations, December 22, 2017, https://press.un.org/en/2017/sc13141.doc.htm.