

A man with a beard and blue eyes, wearing a blue hard hat with an "NDT TOUGH" logo and a high-visibility yellow-green vest over a dark jacket, is holding a large, dark, cylindrical industrial pipe. The background is a snowy, open landscape under a cloudy sky. The man is looking directly at the camera with a serious expression.

**NDT
TOUGH**

Interview with Andri Haraldsson

Ensuring safety in Iceland's geothermal network with NDT

In Reykjavik, Iceland, Andri Haraldsson of HB Technology Services ehf. plays a crucial role in inspecting central heating pipes. Using advanced X-ray technology, he is part of a team that ensures the safety and reliability of Iceland's geothermal infrastructure. In this interview, Andri shares insights into non-destructive testing, their tools, and how new technology improves efficiency.

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HB Technology Services and the industry in Iceland

"HB Technology Services is a family-run company specializing in NDT," says Andri Haraldsson. "I'm a Level 3 Inspector, working alongside my father. Together, we've built a strong reputation for quality and precision."

In Iceland, the NDT industry is small but critical. "There are only three inspection companies here," he explains. "Two of them are licensed for X-ray testing, and just three people in the entire country are certified RT (X-ray) inspectors, my father and I are two of them."

Tools and technology

The company uses a range of inspection tools, but their most advanced equipment is their X-ray systems. "We use portable X-ray systems, ultrasonic testing (UT) machines, and magnetic particle inspection (MPI) tools," Andri says. "We also perform liquid penetrant testing, but the X-ray systems are by far the most complex."

Before acquiring the EVO 225D/1200 in 2017, they relied on an older, heavier Comet system. "That machine was a beast - 40 kilos," Andri recalls. "When we got the EVO 225D/1200, at just 28 kilos, it felt like a game-changer. It's powerful, versatile,

and has been incredibly reliable over the years. The only issue we've had was a broken connection cable, which was easy to replace."

The impact of the ECO X-ray system

In late 2023, the company introduced the ECO X-ray system, and the difference was immediate. "The ECO has been a major improvement," Andri says. "It weighs only 14 kilos, which is half the weight of the EVO. That makes a huge difference when you're working in tight spaces or at height."

Since acquiring the ECO, the team has used it intensively on a six-month project. "We've been running inspections two to three days a week, 10-hour shifts and the ECO has held up perfectly," he explains. "It's lighter, easier to maneuver, and significantly reduces strain on the operator."

Despite its compact size, the ECO doesn't compromise on performance. "It's still powerful," Andri says. "If we need more power, we use the XPO, but for most tasks, the ECO is our first choice. It's efficient, reliable, and much easier to handle."

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Andri Haraldsson, Level 3 inspector

Advancements in NDT

Pipeline inspections, particularly for smaller diameters, have greatly benefited from the ECO's portability. "Every house in Iceland relies on geothermal heating, and when new neighborhoods are built, their pipe networks need to be checked," Andri explains. "A lot of this work happens in ditches, where we have to get under and over pipes. The ECO's compact size makes that much easier."

He also highlights the importance of familiarity between systems. "Since we've used the EVO 225D/1200 for years, we know exactly how to bal-

ance and position the ECO- it's basically a shrunk-down version of the bigger system. That makes transitioning between them seamless."

Looking ahead, Andri sees technology continuing to transform the industry. "The introduction of lighter, more adaptable tools is making a big impact. The ECO has improved efficiency, reduced fatigue, and made inspections easier in tough environments. Having reliable, high-performance tools is critical in NDT, and we're very happy with what we have."

The ECO 200D placed on central heating pipes in Akranes, Iceland.





Andri and Magnús from HB Technology Services ehf., digging a central heating pipe free of snow for X-ray inspection.

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