

The Nordstream PIG Bomb

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There aren't any answers here, just an idea. I am not saying that this is what happened, just that this is a practical possibility that I have not heard anyone mention yet.

Of all the players that could have damaged the Nordstream pipeline, Germany and especially Russia could have done so with virtually no risk of discovery by using their Nordstream PIG terminals.

A common practice in the pipeline industry is to send a device called a PIG (Pipeline Intervention Gadget) through the pipe. It can be a passive device used to separate different products pumped sequentially down the same pipeline. A PIG can also be active, with devices for recording conditions inside the pipe. Some are even robotic and are able to propel themselves rather than relying on product flow to push them along.

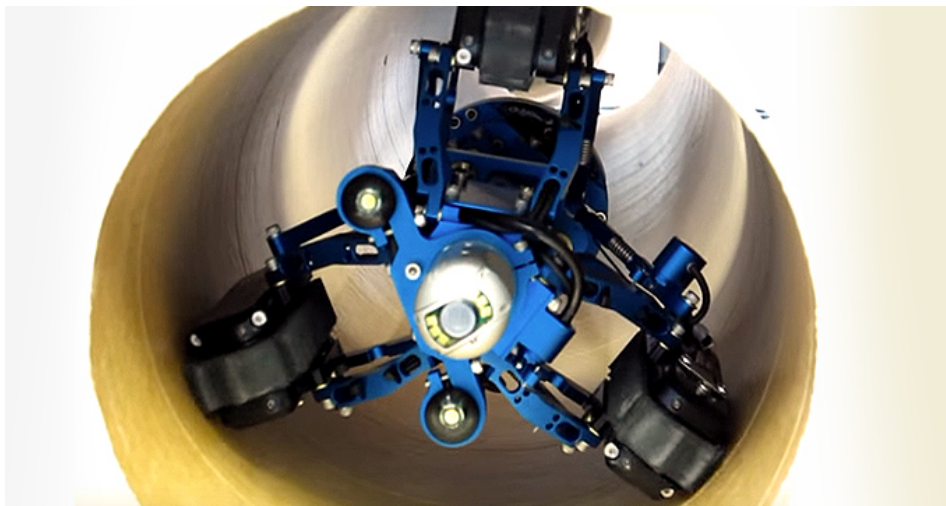


Cutaway Display of a PIG in a Pipe

The Nordstream PIG Bomb



Simple PIG with Wire Brush for Cleaning



A Robotic Pig

The Nordstream PIG Bomb



A Large, "Intelligent" PIG Used on Nordstream



A PIG Being Inserted Into a Pipeline

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PIGs are typically inserted and received at either end of a pipeline using specially designed ports.



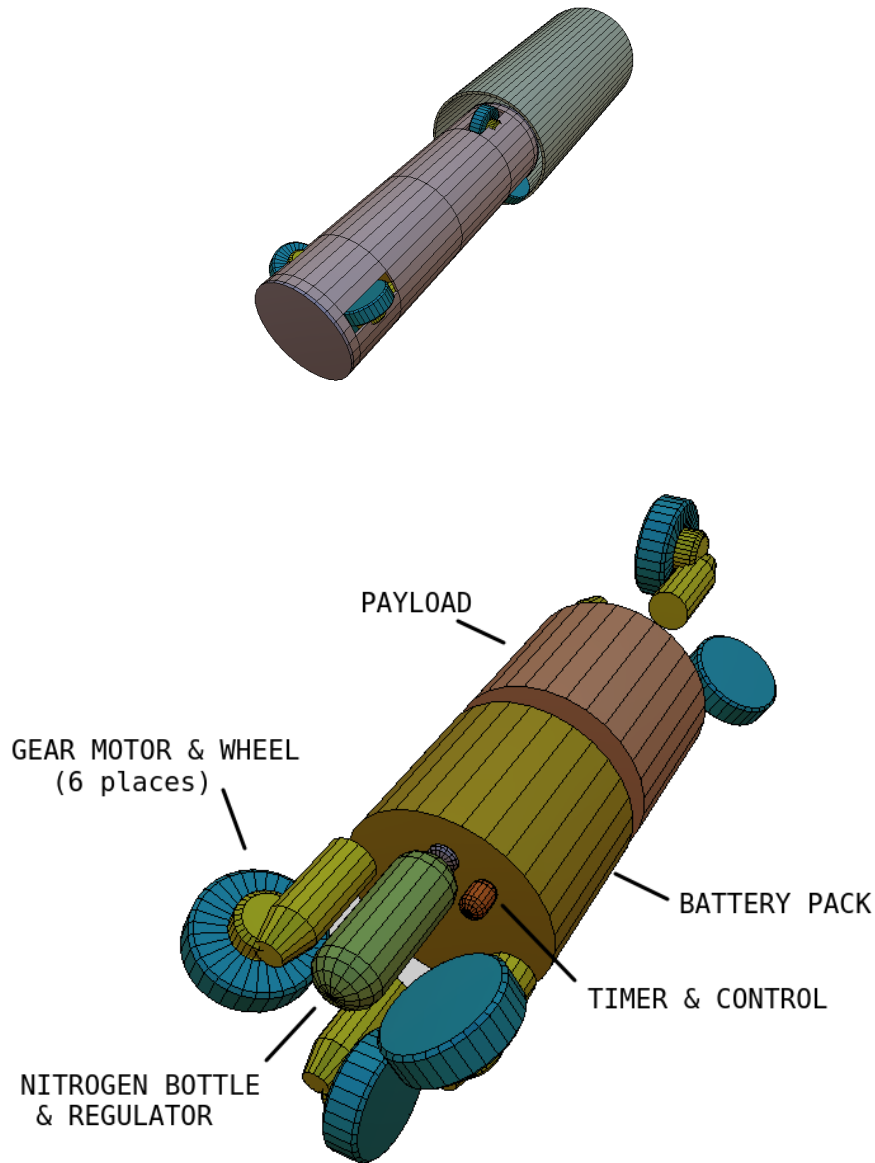
Nordstream PIG Launching and Receiving Station

It would require little design work with readily available industrial components to build a PIG Bomb that would make its way through a pipeline to a fixed distance and then self detonate. A passive PIG could be used in a pipeline that was in use, or a robotic PIG for one where product was not flowing. A robotic PIG could also work contraflow if its profile was reasonably smaller than the pipeline and the gas flow was at a reduced level.

If it was desirable to destroy the pipeline without any telltale components left around, a PIG Bomb could crawl to the desired location, deposit a chemically timed non metallic explosive device and then run itself backwards to the home base.

One problem with the PIG Bomb is that even without leftover bomb fragments lying around, detonation from inside the pipeline, might leave telltale burst type distortion at the ragged ends of the pipe.

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Note: The nitrogen bottle is necessary to pressurize the motors to prevent ingress of pipeline gas. The battery pack would consist of gel cells in an insulating oil.

Conclusion

If Russia (or Germany) wanted to destroy the pipeline with little risk of being discovered, a PIG Bomb would do the trick.