



Oval tube patents for heat exchangers

It's one of those things with patents. You can always find a patent attorney, who issues a patent for dubious companies for a lot of money, which is totally worthless and can be challenged in court without any problems. You just have, to be able to prove, that in this case, oval tubes for heat exchangers were manufactured long before this patent was granted.

The company <https://www.gea.com/> had already manufactured oval tubes for heat exchangers, when the two subsequent company owners were still playing in the sandbox as little children with completely full shitty diapers.



A so-called inventor and patent holder is https://www.howatherm.de/de/produkte_anwendungen/produkte/hochleistungs-wrg/system_ecofin_6/, who writes: *Evolution in the performance increase of heat recovery systems with the new EcoFin+ system. The engineers at Howatherm have reached a new dimension in heat transfer with the EcoFin+ fin and tube geometry. To date, the use of the EcoFin fins in Howatherm air handling units has already offered a specific performance increase of 27% compared to heat exchangers with conventionally designed fins. The heat exchanger either delivered a significantly higher output or could be dimensioned smaller with the same output. With the evolution of the EcoFin+ system, which has now been implemented, the pressure drops of the heat exchangers can now also be reduced by 45% through the use of more streamlined tubes. This is particularly important when using the heat recovery system, where pressure drops can easily be as high as 250 Pa. With EcoFin+, pressure drops can be reduced to less than 150 Pa while maintaining unchanged thermal properties.*

Another so-called inventor and patent holder is <https://www.refrion.com/de/technologie/ovalrohr/>, who writes: *We invented them and now we are the exclusive patent holders. Of course, we are talking about oval tube technology for heat exchangers. It offers ultra-high heat exchanger performance through reduced airside pressure drop in the heat exchanger, which also reduces the energy requirements of the fans. The innovative geometry of the tubes is a real revolution in heat exchanger production. This geometry improves cooling performance by up to 15% compared to round tube geometries. The air-side pressure drop can be reduced by up to 40%, resulting in reduced power consumption of the fans. All this results in lower energy consumption.*

That's why everyone should make heat exchangers with oval tubes as they please!