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## Effect of heat treatment on precipitation behaviour of intermetallic phases in duplex steel

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The precipitation of intermetallics at grain boundaries occurs when duplex stainless steel is exposed in some temperature ranges. For example, heat treatment between 500 – 1000°C can cause the formation of a friable sigma phase in duplex stainless steel. The effects of the annealing temperature on the microstructure were investigated by means of dilatometric measurements, optical microscopy, scanning electron microscopy and EBSD. The analyses describe the precipitation kinetics of sigma and other intermetallic phases in particular grade of duplex steel, which is necessary to know to avoid decreasing of corrosion resistance and mechanical properties which are strictly connected to presence of intermetallics in the microstructure.

### Biography

Pavel Podany was born in 1979 in Pilsen – Czech Republic. He achieved master degree in Materials Science in 2004 on University of West Bohemia in Czech Republic (Europe) and achieved PhD in same field on 2011. He works in COMTES FHT (private research company) from 2007. He is a head of Department of Materials Analysis and head of accredited testing laboratory. He is an author and co-author of more than 20 papers published on international conferences and scientific journals.

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