Webinar: Refractory metals and their applications

From 12 May to 14 May 2020, the German materials science association DGM will be holding a webinar entitled “Introduction to metallic high-temperature materials”. One of the topics covered will be the special properties and applications of refractory metals from Plansee.

High-temperature materials represent an important field of research within the areas of power engineering and mobility. Their performance often determines the overall efficiency of the systems in which they are integrated, and this is especially true of aircraft turbines. In such applications, the materials must be able to withstand high mechanical and corrosive stresses at high temperatures of over 1,000 °C. At the same time, the density should not be too great, since the loads on the material depend on the mass of the material itself when components are rotating, as is the case with turbines. In this context, nickel alloys in particular have become established as one class of materials that meets the requirements profile. Against the backdrop of ever more stringent requirements, however, new alloys are also arriving on the scene. This class of materials includes refractory alloys and intermetallic aluminides in particular, with titanium aluminide at the top of the list.

Refractory metals, their excellent high-temperature properties and the special characteristics of this class of materials, will be the topics Dr. Wolfram Knabl, Head of Development Core Technologies and Materials will be talking about in his lecture.
The webinar will provide an overview of traditional and unconventional alloy systems, how they are produced, what properties they have and the challenges they pose in industrial applications. The course is thus particularly aimed at industrial users and young professionals who have as yet had little contact with high-temperature materials, as well as those at universities and research institutes who want to gain an overview of metallic high-temperature materials.

The webinar is being organized by the German materials science association Deutsche Gesellschaft für Materialkunde e.V. For more information and to register for the course here.