Gas turbines are used for the production of electricity and in aircraft engines. To increase the life-span of the turbines, they are sprayed with a surface coating. The coating consists of two layers – one of metal to protect against oxidation and corrosion , and one of ceramic to give thermal insulation. The structure of the coating varies greatly, consisting of pores and cracks of different sizes. It is these cracks and pores that largely determine the efficiency of the thermal insulation and the length of the coating life-span.

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