# Cable for overhead power lines

## Description of the solution:

The object of the invention is a power conductor for overhead power lines of composite construction, the carrier-conductive core of which is made of copper alloys with high mechanical strength and electrical conductivity, and the outer layers superimposed on this core are made of wires made of pure technical aluminium in the soft state.

## Benefits of the solution:

- Reduction in transmission losses.
- Reduction of $CO_2$ emissions.
- Increase in current carrying capacity.
- Improvement of electrical conductivity.
- Increasing the operating temperature limit level of the conductor to higher values than for conventional conductors (i.e. above the typical temperature of 80°C).
- Reducing the outer diameter of the conductor by increasing the metal filling of the conductor cross-section is beneficial from the point of view of performance parameters such as wind pressure on the conductor or rime load on the conductor.

## Area of application:

Power engineering (transmission of electric energy).

## Technology readiness level:

9

## Intellectual property:

Inventions: PAT.244540
Community designs: from 001961939-0001 to 001961939-0006

## Owner:

KGHM Polska Miedź S.A.,
Akademia Górniczo-Hutnicza
im.Stanisława Staszica w Krakowie,
Sieć Badawcza Łukasiewicz
- Instytut Metali Niezależnych,
Tele-Fonika Kable S.A.

## Contact:

wlasnosc.intelektualna@kghm.com