Some manufacturers have developed special spherical bearings, such as those described for example in EP 1523598, where the PTFE sheet is replaced by an ultra-high molecular weight polyethylene (UHMWPE) sheet characterised by greater wear resistance and a higher permissible sliding speed than the PTFE sheet, thus making these bearings suitable for use in bridges and viaducts of high-speed railway lines. However, these are still complex and expensive solutions which, moreover, due to the use of UHMWPE, which is not among the materials required by the technical standards, require a long time to obtain from the regulatory authorities the necessary approvals for their use in civil constructions.

There is therefore still a need to find effective solutions for the creation of a simple, economic and easy to maintain structural support, which has a long life and is compatible with the rapid oscillations of the superstructure due to traffic, and in particular the rail traffic of high-speed lines, which is a purpose of this invention.

Summary

According to an aspect, the present disclosure refers to a pot bearing comprising a pot, an elastomeric pad accommodated in said pot, a plate resting on said elastomeric pad and protruding at least partially into the pot, and at least an internal seal circumferentially surrounding the rim of the elastomeric pad to achieve a sliding sealing between the latter and the pot, said seal being made entirely or mainly from polytetrafluoroethylene, characterized in that said polytetrafluoroethylene is modified with the addition of perfluoropropylvinylether in a percentage ranging between 0,1 % and 0,3% by weight.

This purpose is achieved by means of a pot bearing, the main features of which are set out in the above aspect, while other features are set out in the present disclosure.

The idea of a solution underlying this disclosure is to make the internal seal, preferably of the annular type, of the pot bearing starting from a semi-finished product, such as, for example, a band obtained by drawing, which consists entirely or at least mainly of PTFE modified with the addition of perfluoropropylvinylether (PPVE) in percentages between 0,1% and 0,3% in weight.

The addition of PPVE in the above percentages gives PTFE particular properties, some of which, such as weldability, impermeability to gases and liquids and low porosity, are already exploited in the manufacture of seals and seats for ball valves, non-stick coatings and components with complex geometric shapes that can be advantageously achieved by welding, for example in the production of fittings and transport systems of industrial fluids for applications in the chemical, pharmaceutical and electronic sectors.

The addition of PPVE as a PTFE modification agent for use in structural bearings is already described in WO 2015/136457, by the same inventor, which concerns a sliding bearing of the type described in EN 1337-7:2004. In that case, PTFE modified with PPVE is used in the form of a sheet, obtained from a semi-finished product