15th European Vacuum Conference (EVC-15)



Contribution ID: 404 Type: Plenary

Getter pumping for particle accelerators

Monday 18 June 2018 16:05 (40 minutes)

Non-Evaporable Getters (NEG) were first adopted to provide a fast, evenly distributed pumping for the Large Electron Positron collider (LEP) at CERN. The NEG, in the form of a getter powder coated strip, was installed along about 23 Km of the LEP vacuum chamber.

A similar solution was later applied to pump the room temperature sectors of the present CERN major accelerator, the Large Hadron Collider (LHC). In this case, the NEG strip was replaced by a thin film of NEG, coated on the internal walls of the LHC chambers by a sputtering technique.

More recently, a roll-to-roll coating machine has been developed to NEG coat a thin aluminium foil by sputtering. Although developed for a Solar Energy application, this technique could also be applied to particle accelerators, by shaping the coated foil in the form of a liner to be inserted inside vacuum chambers of any geometry. Such a liner would either replace or complement the chamber coating.

Primary author: Prof. BENVENUTI, Cristoforo (CERN)

Presenter: Prof. BENVENUTI, Cristoforo (CERN)

Session Classification: 60 years IUVSTA

Track Classification: 60 years of IUVSTA