Following the disjunction of a pump, a succession of beats of clapper anti-return were observed. They are frequently followed by large variations of pressure. That can lead to damage along the system. In this paper we present the study of the conditions of appearance of these beats and the analysis of counterbalance effect as one of the possible solutions to this problem. © 2002 Éditions scientifiques et médicales Elsevier SAS. All rights reserved