
Circular units of some real cyclic number fields

Milan Werl

Let K be a cyclic field whose genus field in the narrow sense is real and which is totally ramified at each ramifying prime. Then after a construction two explicit roots of circular units it is possible to find a basis for the group $C_W(K)$ of circular units of K defined by Washington. This basis enables us to compute the index of $C_W(K)$ in the group $E(K)$ of all units of K using Sinnott's formula for the index of the group of Sinnott's circular units in $E(K)$.