

# On Closed Ideals in a Certain Class of Algebras of Holomorphic Functions

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*Abstract.* We recently introduced a weighted Banach algebra  $\mathfrak{A}_G^n$  of functions which are holomorphic on the unit disc  $\mathbb{D}$ , continuous up to the boundary and of the class  $C^{(n)}$  at all points where the function  $G$  does not vanish. Here,  $G$  refers to a function of the disc algebra without zeros on  $\mathbb{D}$ . Then we proved that all closed ideals in  $\mathfrak{A}_G^n$  with at most countable hull are standard. In the present paper, on the assumption that  $G$  is an outer function in  $C^{(n)}(\overline{\mathbb{D}})$  having infinite roots in  $\mathfrak{A}_G^n$  and countable zero set  $h(G)$ , we show that all the closed ideals  $I$  with hull containing  $h(G)$  are standard.