



US 20220377849A1

(19) **United States**(12) **Patent Application Publication**
LEIGH(10) **Pub. No.: US 2022/0377849 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **CERAMIC ELECTRIC HEATING ELEMENT
HAVING A TWOLAYER STRUCTURE AND
ELECTRIC SOLDERING IRON****Publication Classification**

(51) **Int. Cl.**
H05B 3/14 (2006.01)
H05B 3/18 (2006.01)
B23K 3/03 (2006.01)

(52) **U.S. Cl.**
CPC *H05B 3/141* (2013.01); *H05B 3/18*
(2013.01); *B23K 3/0353* (2013.01); *B23K*
3/0369 (2013.01)

(71) Applicant: **CHONGQING LE-MARK
TECHNOLOGY CO., LTD.,**
Chongqing (CN)(72) Inventor: **Peter LEIGH**, Chongqing (CN)(21) Appl. No.: **17/761,134**(22) PCT Filed: **Sep. 11, 2020**(86) PCT No.: **PCT/CN2020/114709**

§ 371 (c)(1),

(2) Date: **Mar. 16, 2022**(30) **Foreign Application Priority Data**

Sep. 25, 2019 (CN) 201910912270.2

(57) **ABSTRACT**

Disclosed are a ceramic electric heating element having a two-layer structure, and an electric soldering iron. The electric heating element having a two-layer ceramic structure comprises an inner conducting layer and an outer insulating layer; the insulating layer wraps the conducting layer, and the conducting layer is exposed outside the insulating layer at the head and tail of the electric heating element. In addition, the ceramic electric heating element having a two-layer structure is used to the electric soldering iron. The present invention allows the miniaturization in the manufacture of ceramic electric heating bodies, with low production cost and low difficulty in respect of the process.

