

The invention relates to a method for heating a furnace comprising radiant tubes and being able to thermally treat a running steel strip comprising the steps of: i. supplying at least one of said radiant tubes with  $H_2$  and  $O_2$  such that said  $H_2$  and said  $O_2$  get combined into heat and steam, ii. recovering said steam from said at least one of said radiant tubes, iii. electrolysing said steam so as to produce  $H_2$  and  $O_2$ , iv. supplying at least one of said radiant tubes with said  $H_2$  and  $O_2$  produced in step iii, such that they get combined into heat and steam.