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Development of New Type Ignition Apparatus for the Sintering Machine

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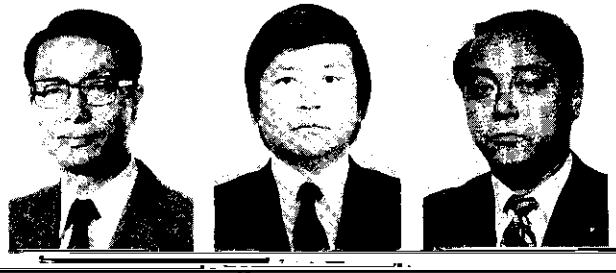
Synopsis :
Kawasaki Steel has developed new ignition apparatus for the sintering process which are completely different from conventional ones: the "line burner" at Chiba Works and the "slit burner" at Mizushima Works. The line burner was applied to Chiba sintering plant in 1983; the slit burner to Mizushima sintering plant in 1983. Their features are given below: (1) The multi-hole type nozzle and the slit type nozzle give uniform and short flames, and have realized more effective ignition. (2) The burners are made adjustable to optimize ignition according to sintering condition. Through the use of these new burners, the ignition energy consumption can be reduced by half to as low as 6000 to 8000 kcal/t-sinter without encountering any operational problems.

Development of New Type Ignition Apparatus for the Sintering Machine*



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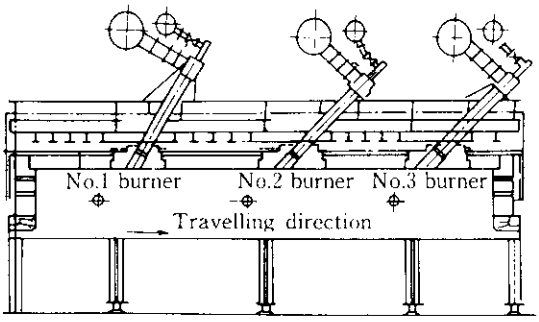
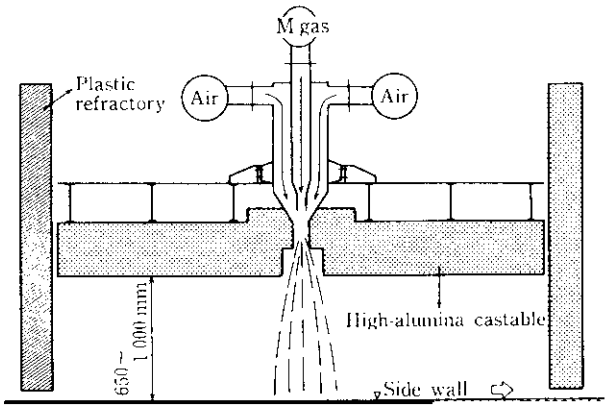


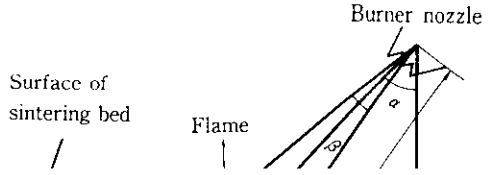
Longitudinal section



considerably large from the furnace body.

(2) The long pitch of the burners makes widthwise ignition intensity uneven, resulting in excessive ignition.

(3) The ignition furnace is not capable of responding



obtained when the intersecting angle of air and gas was

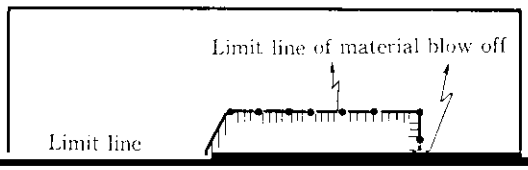
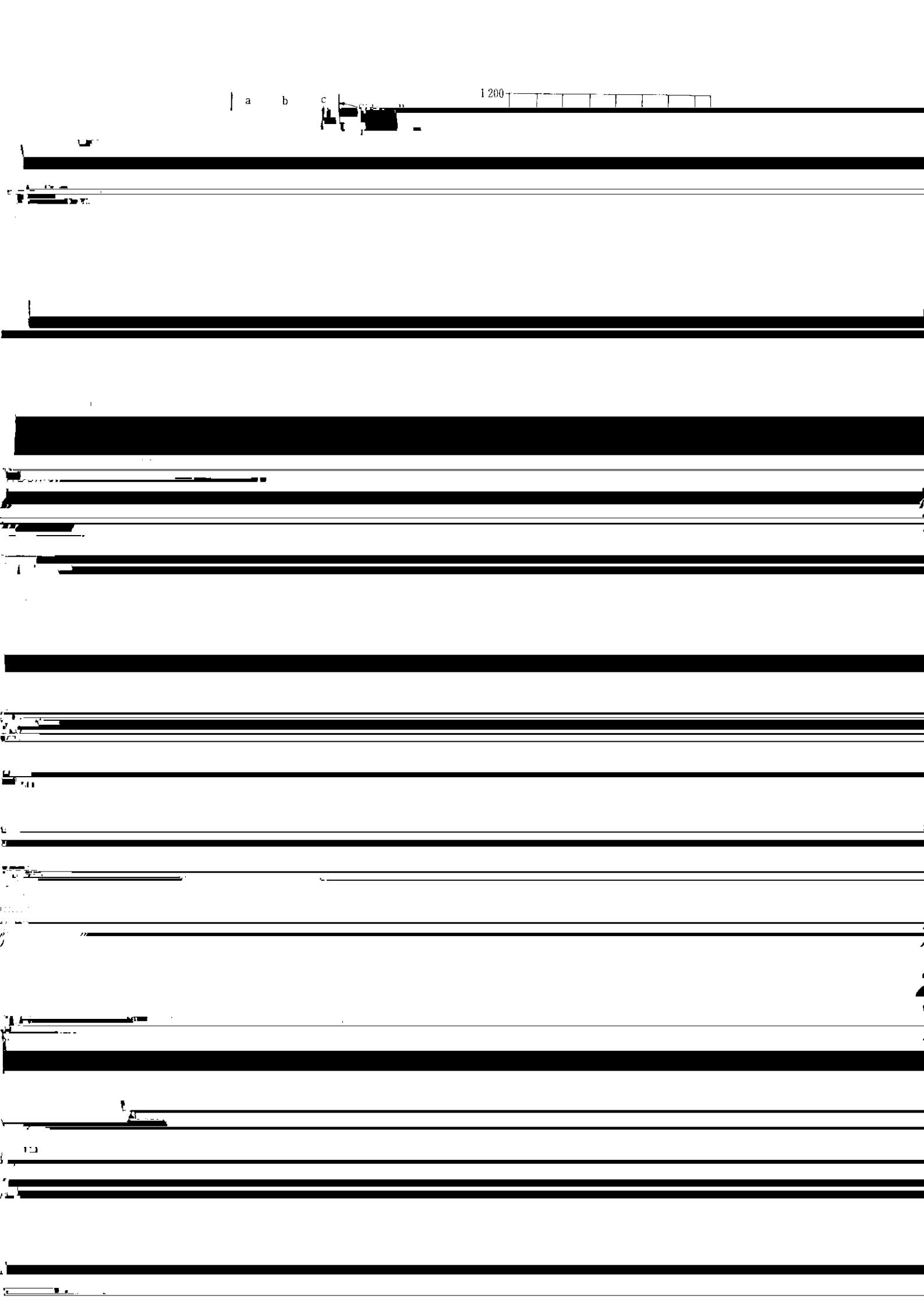
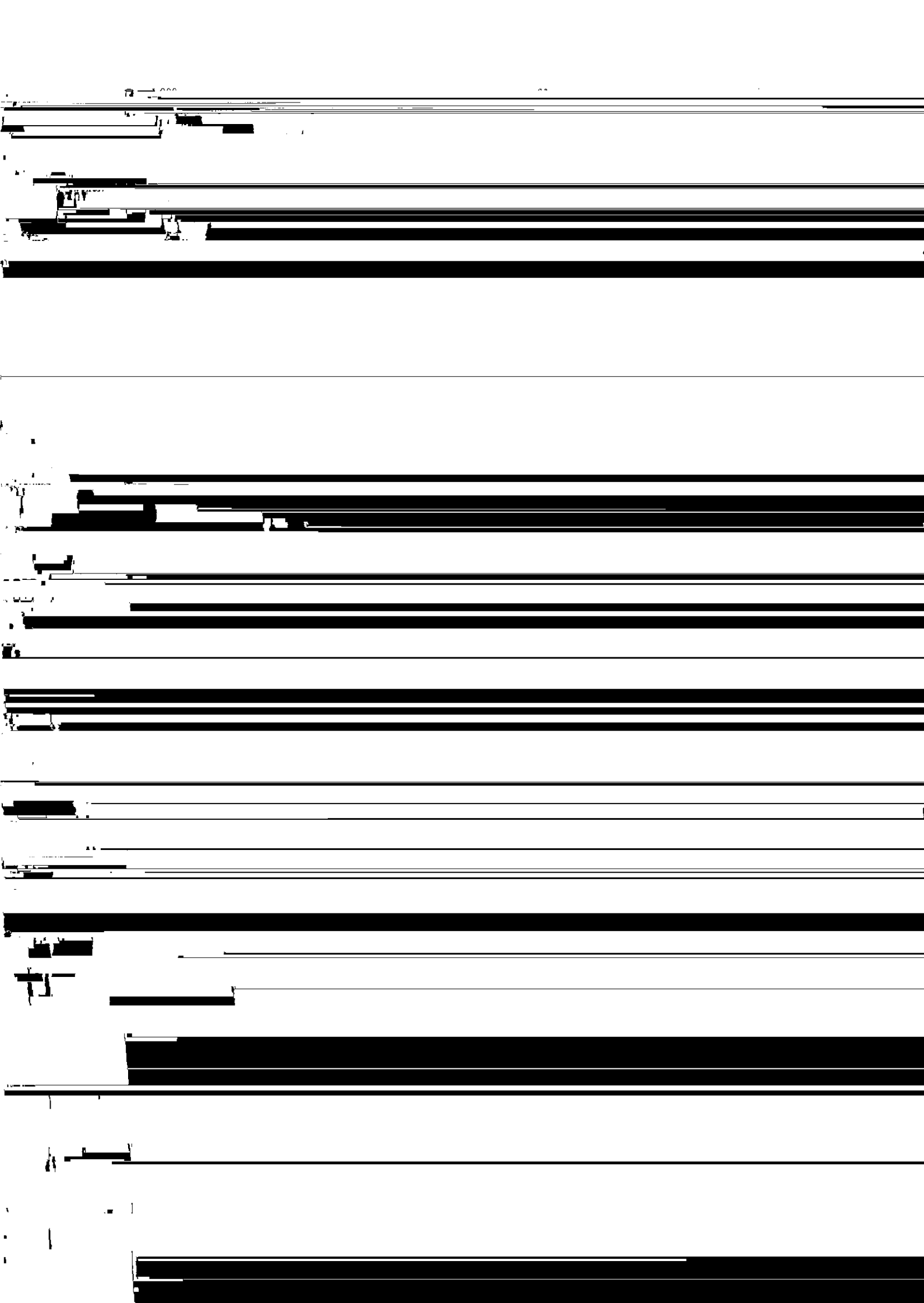
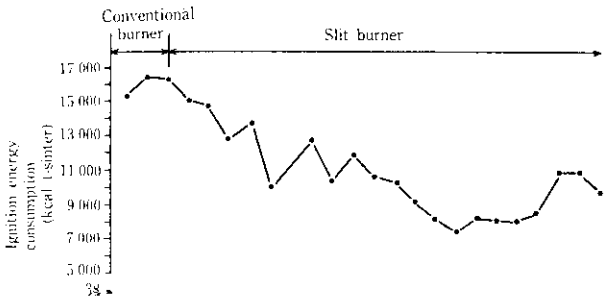


Table 1 Comparison of conventional ignition furnace and line burner (Chiba No. 3 sintering plant)

Item \ Specifications	Conventional ignition furnace	Line burner


a
b
c
1 200




Conventional burner
Slit burner
17 000
15 000
13 000
11 000
9 000
7 000
5 000
Ignition energy consumption (kcal t-sinter)