

KAWASAKI STEEL GIHE9*(Hiroshita)ashi)

(Hirohisa

Hinata)

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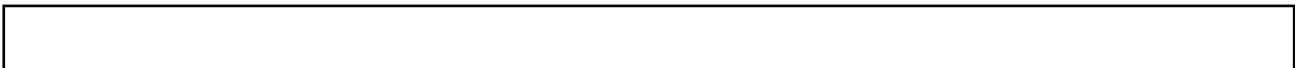
10 40

(R)

40

of the mixture and the condition of pores existed. And the black tone of color of glass and the iron-phosphide alloy included in the fused sewage slag mark silver-black color spots on the pavement block, looking like a high-grade design of the natural stone surface, and KAWAPROM ACE also has the function of building up ground water. By the follow-up of the test road surface laying KAWAPROM ACE, it was certified by the public assay service that the heavy metal group elements were not detected in the extracted solution. Therefore KAWAPROM ACE makes the pavement which gives gentler views to the street. KAWAPROM ACE containing 40% and over of fused sewage slag was approved of ECO-Mark Goods which were authorized as the useful recycle-goods for an ecological system by Japan Environment Association.

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下水汚泥溶融スラグをリサイクル使用した 舗道材「カワプロムエース®」の開発*

川崎製鉄技報
27 (1995) 1, 19-26

by Recycling Fused Sewage Slag



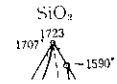
要旨

下水汚泥溶融スラグのリサイクル使用を目的として、粘土、長石および珪石で構成される原料に10~40%の下水汚泥溶融スラグを

が強く、リサイクルれんがとの取組姿勢は低調である。

このような社会的環境のなかで、川崎が材(株)が1987年に経営の多角化として建材事業進出を検討したとき、これをエコビジネスとして、育成したいと考え各種の副産物をリサイクル利用した舗道

- C1: Fused sewage slag
(polymer system)
C2: Fused sewage slag
(lime system)
D: Lime system sewage
cake and incinera-



- A: Porcelain region
B1: Pavement I
(1190-1210°C firing)
Mineral Phase-quartz,
albite anorthite,
mullite, glass

Table 1 Classifications of factors and characteristics of pavement

1st factor	2nd factor	3rd factor	Properties of pavement
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Mixing Process

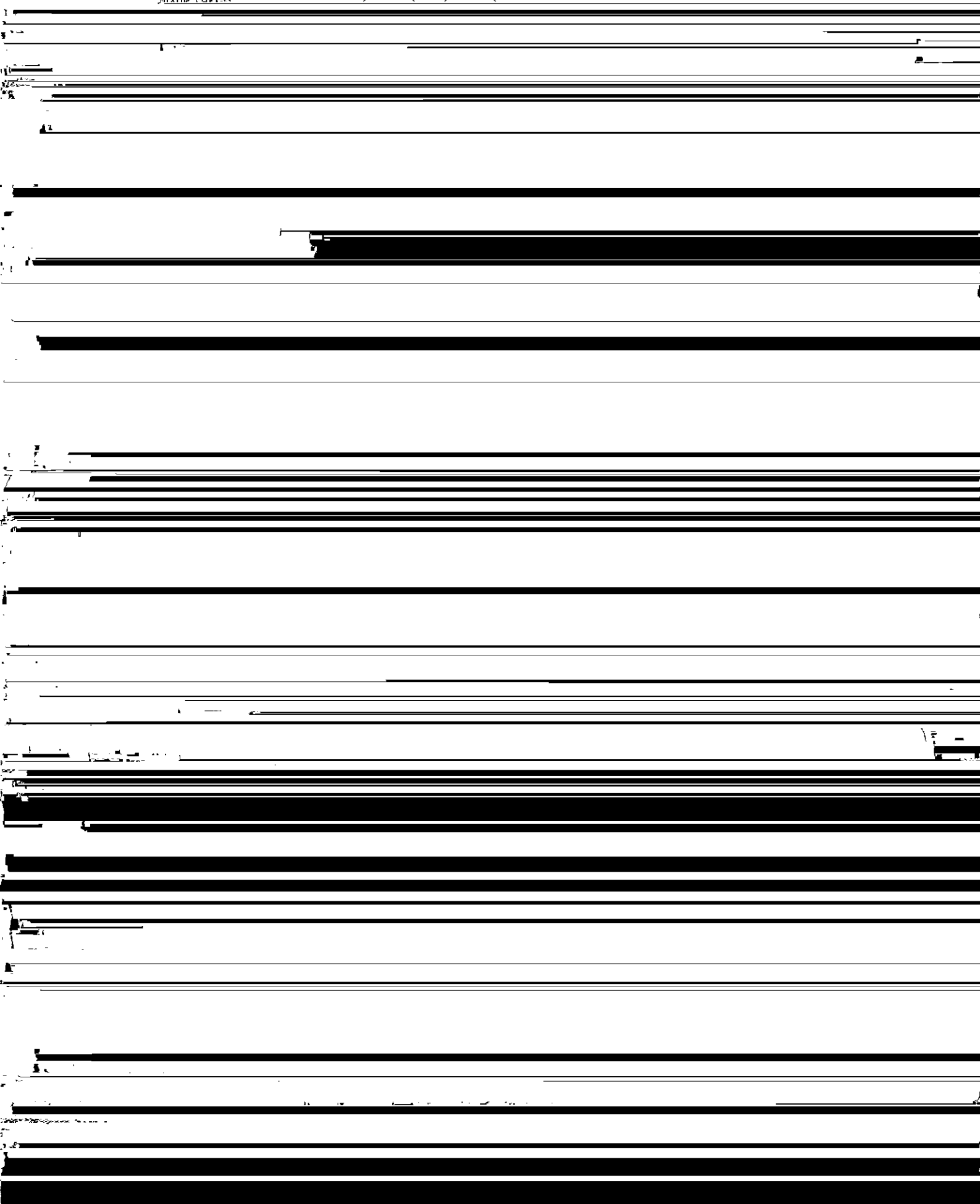


Table 3 Effect of slag content on the physical properties of pavement block sintered at 1200 °C

Sample No.	0	1	2	3	4	5	6
Slag contents (%)	0	10	20	30	40	50	60
Appearance after sintering	OK	OK	OK	OK	OK	foa.	def.&foa.
Linear change after firing (%)	0.2	0.1	0.1	0.2	-0.1	±0	±0
Absorption of water (%)	5.6	5.1	5.1	4.8	4.7	4.5	4.7
Compressive strength (MN/m ²)	49.4	57.2	61.1	67.1	68.7	59.2	55.8
Bending strength (MN/m ²)	5.9	6.6	7.4	9.3	8.9	7.3	8.6

Base mixture : Silica and feldspar porcelain (B1) foa. : foaming def. : deformation

しく変化する。たとえば、Fig.3のA領域の粘土系の原料（白土）にスラグを加えて1300°Cで焼成した場合、スラグが高粘性のガラスに変化し、表面に吹き出し、強度低下を招く。

Table 4 Technical data of KAKWAPROM ACE

Physical properties	Specification	Typical data
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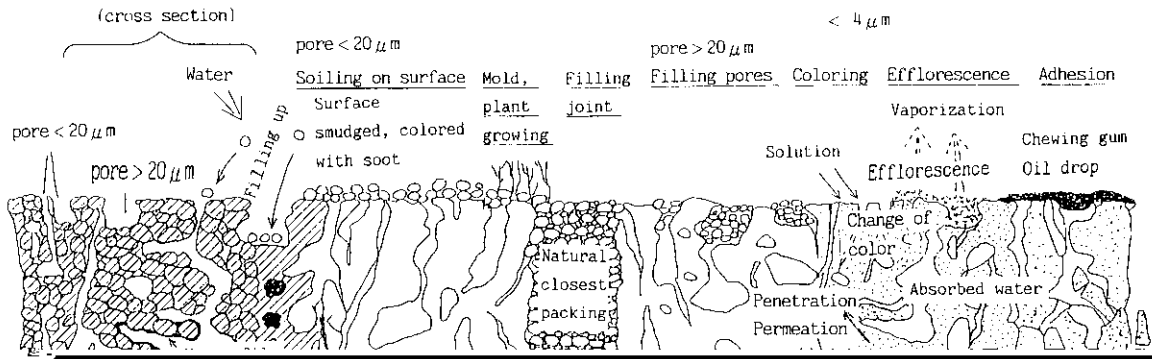
研究開発部 環境・社会貢献部 環境対策課 環境対策課長 佐藤 隆夫

KAWAPROM ACE and fused slag (mg/l)

不所もはらんでいる。しかも目詰まりを起こしはじめると汚れとい

Brick structure

Soiling material





6 結 言