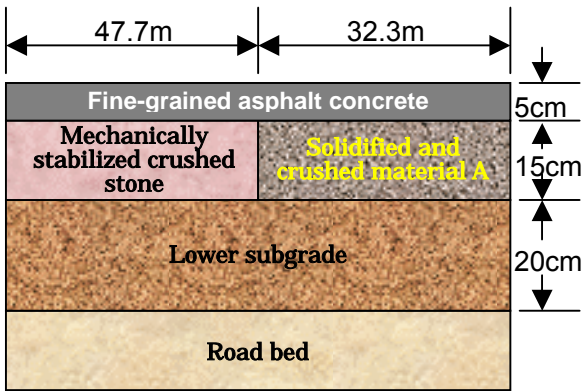


**The workability and serviceability of granular solidified coal ash subgrade material are confirmed to be the same as those of natural crushed stone.**

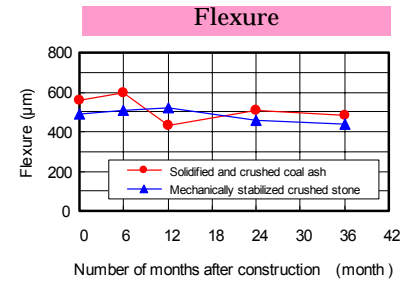
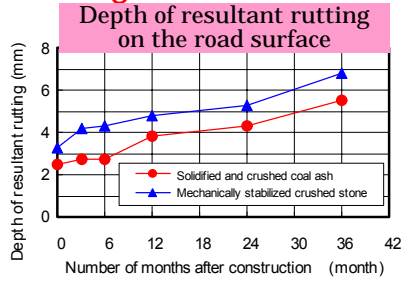
**Experimental application on the premises of a power plant A (M-40)**



**Characteristics of solidified coal ash as subgrade material**

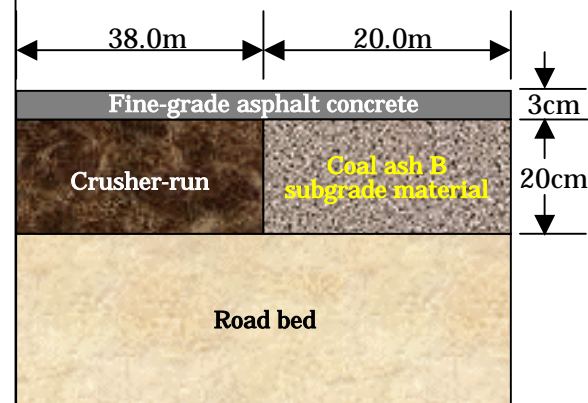
- Specific gravity in surface-dry state : 1.70
- Compression strength : 288 N/10mm
- Fineness modulus : 5.31
- Abrasion loss : 33.0 %
- Optimum moisture content : 37.0
- Maximum dry density : 1.113 g/cm<sup>3</sup>
- Modified CBR : 90.2 %

**Changes in road surface condition**



Sample		Immediately after production	1 years after construction	2 years after construction	3 years after construction	Soil environmental standards
Compression strength	[N]	288.2	282.6	372.9	326.6	-
Specific gravity in surface-dry state	[-]	1.7	1.72	1.72	1.73	-
Elution of hazardous heavy metals [mg/L]	F	<0.2	<0.2	<0.2	<0.2	<0.8
	B	0.14	0.1	0.11	0.18	<1.0
	Pb	<0.001	<0.001	<0.001	<0.001	<0.01
	Cd	0.0001	<0.0001	0.0001	0.0001	<0.01
	As	0.003	0.004	0.004	<0.003	<0.01
	Cr6+	<0.01	<0.01	0.01	<0.01	<0.05
	T-Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Se	<0.003	<0.003	<0.003	<0.003	<0.01	

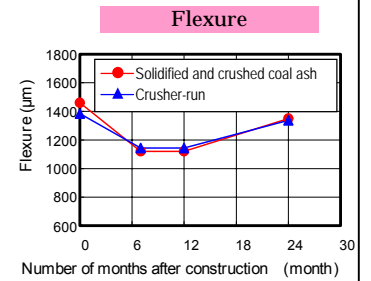
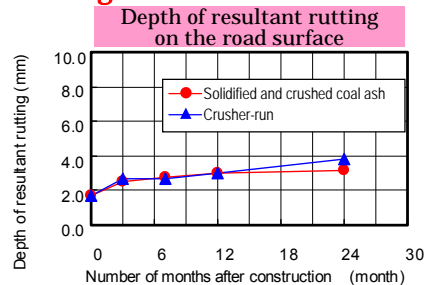
**Experimental application on the premises of a power plant B (C-40)**



**Characteristics of solidified coal ash as subgrade material**

- Specific gravity in surface-dry state : 1.60
- Compression strength : 227 N/10mm
- Fineness modulus : 5.32
- Abrasion loss : 43.0 %
- Optimum moisture content : 41.6
- Maximum dry density : 1.145 g/cm<sup>3</sup>
- Modified CBR : 113.5 %

**Changes in road surface condition**



Sample		Initial	1 years after construction	2 years after construction	3 years after construction	Soil environmental standards
Compression strength	[N]	227	285	270	261	—
Specific gravity in surface-dry state	[-]	1.60	1.59	1.61	1.66	—
Elution of hazardous heavy metals [mg/L]	F	<0.2	<0.2	<0.2	<0.2	<0.8
	B	0.42	0.19	0.26	0.2	<1.0
	Pb	<0.001	<0.001	<0.001	<0.001	<0.01
	Cd	0.002	<0.001	<0.001	<0.001	<0.01
	As	0.003	0.004	0.006	0.004	<0.01
	Cr6+	0.02	0.01	0.03	0.03	<0.05
	T-Hg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Se	<0.003	<0.003	<0.003	<0.003	<0.01	