



LMC

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LMC FHWA(Federal High-Way Administration)

, 1976 FHWA 32mm Dow S/B Latex LMC 가 (AASHTO Section 8&28, ACI 548.4-93)

, 1,000 LMC 70%

LMC

, LMC 가

2. LMC(Latex Modified Concrete)

2.1

LMC , LMC 50% 50%

2.2 LMC

LMC Latex Modified (合着) LMC

가 LMC 가 가 가

2.3 LMC

가

LMC

2.3.1

LMC 가 LMC 가 4 6% 가 , LMC 가

가 , LMC (W/C)

2.3.2 LMC LMC

AE (Workability)

가 LMC

LMC

LMC

가

LMC

LMC

, LMC

LMC 15%

2.4 LMC

< 1>

LMC

가

		LMC (: kg/cm ²)			
		W/C	1 DAY	7 DAY	28 DAY
Comp	Latex	0.37	144	283	352
	Conventional	0.5	121	293	348
Flex.	Latex	0.4	166	302	422
	Conventional	0.31	-	53	70
Shear Bond	Latex	0.50	-	45	48
	Conventional	0.37	-	18	33
		0.60	-	-	18

1.

가

가

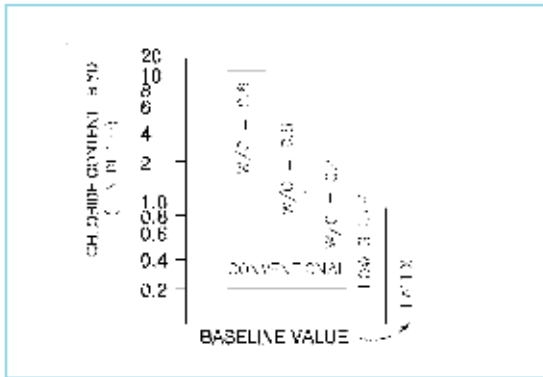
1952 Dow Chemical Co. LMC , 1957 Michigan, Cheboygan

US 23

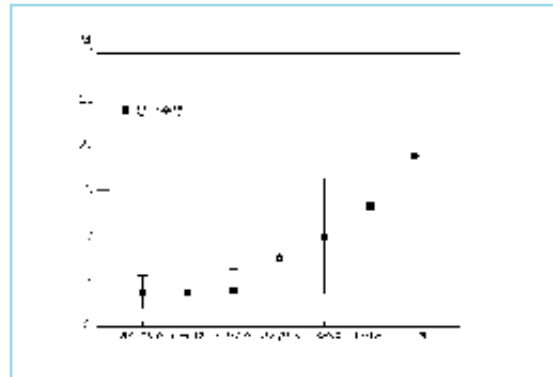
60 LMC

, 1970 Dow S/B

LMC



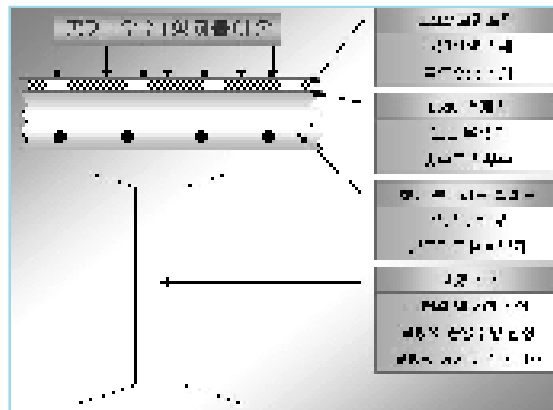
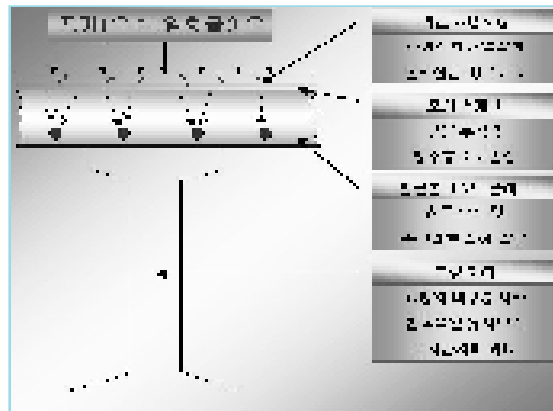
[1] 90 (FHWA)



[2]

< 3> LMC					
Name of St.	Duration of Project	Number of Project	Duration of Project	Name of St.	Number of Project
Connecticut	1991 1993	10	1991 1997	Delaware	15
Illinois	1994 1997	35	1993 1997	Indiana	148
Kansas	1993 1997	9	1993 1997	Kentucky	106
Massachusetts	1989 1995	39	1989 1997	Maryland	21
Michigan	1993 1996	72	1990 1997	New Jersey	129
New Mexico	1993 1997	12	1993 1997	New York	20
North Carolina	1985 1997	49	1993 1996	Ohio	26
Oregon	1993 1995	15	1989 1997	Pennsylvania	139
Rhode Island	1998, 1994	2	1984 1994	South Carolina	15
Tennessee	1991, 1995, 1997	3	1993 1997	Washington	30
Virginia	1986 1992	226	1993 1994	West Virginia	36
Total	Number of St. : 22 / Number of Project : 1,157				

[3] LMC LMC



[3] LMC

가
[1] FHWA 90

LMC

3.

< 2> [2]

< 2>			
	(年)	(年)	(%)
	3.7	1.6	43
	3.7	1.7	46
	4.0	2.1	53
/	7.7	7.2	94
	9.9	6.2	63
	13.5	8.9	66
	18.3	10.1	55

(LCC)
4
LMC 20
5
LMC 4
가 LMC
가
4. LMC
4.1 LMC
LMC

< 3> , 가
LMC
가 LMC
LMC
2
3
LMC
4.2 LMC
LMC
< 4> [4]
LMC
3
LMC



< 4> LMC				
		1 1/2 2 inches	5 mm	[1]
		Sand(Steel) Blaste	2 m m Grinding	[1]
		Air Compressor		
		12	48	[2]
LMC		Mobile Mixer	Batch Plant	
		Mobile Mixer	Agitator	[3]
LMC	Brooming	LMC Mortar	LMC Mortar	
				[4]
		Twin Roller Deck Finisher	Twin Roller Deck Finisher	[5]
		24	48	
		72	72	
		Saw Cutting	Saw Cutting	[6]



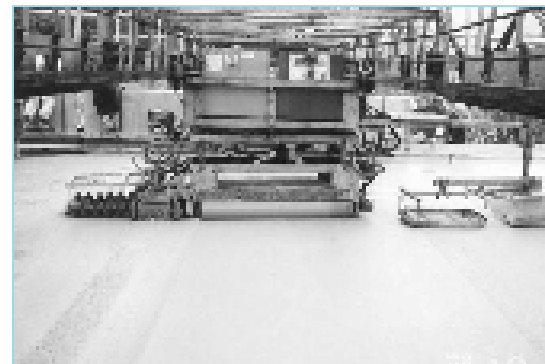
[1] (Grinding)



[3] LMC (Brooming)



[2] LMC (Mobile Mixer)



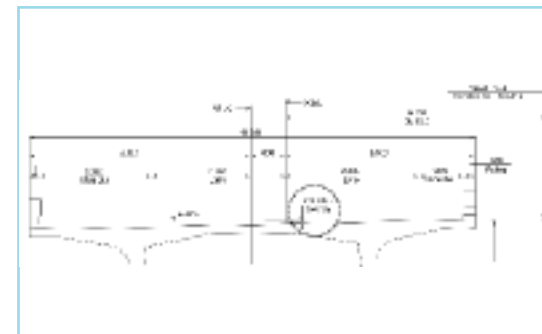
[4] LMC (Deck Finisher)



[5] LMC ()



[6] (Saw Cutting)



[4] LMC ()

5.

LMC

(1) LMC

(2) LMC

(3) LMC

(4) LMC

LMC

1. AASHTO Section 8 & 28, 1996.

2. ACI Committee 548 (1991), "State-of-the-Art Report on Polymer-Modified Concrete," ACI 548.3R-91.

3. ACI Committee 548, "Standard Specification for Latex-Modified Concrete Overlays," ACI 548.4-93, 1996.

4. Clear, K.C. and B. Chollar(1978), "Styrene-Butadiene Latex Modifiers for Bridge Deck Overlay Concrete," FHWA, Report No. FHWA-RD-78-35.

5. Isenburg, J.E., Rapp, D.E., Sutton, E.J., and Vanderhoff, J.W., "Microstructure and Strength of the Bond Between Concrete and Styrene-Butadiene Latex-Modified Mortar," Highway Research Record 370, 1971.

6. Whitting, D.(1981), "Rapid Determination of the Chloride Permeability of Concrete," FHWA RD 91/119.

7."

1997.12.