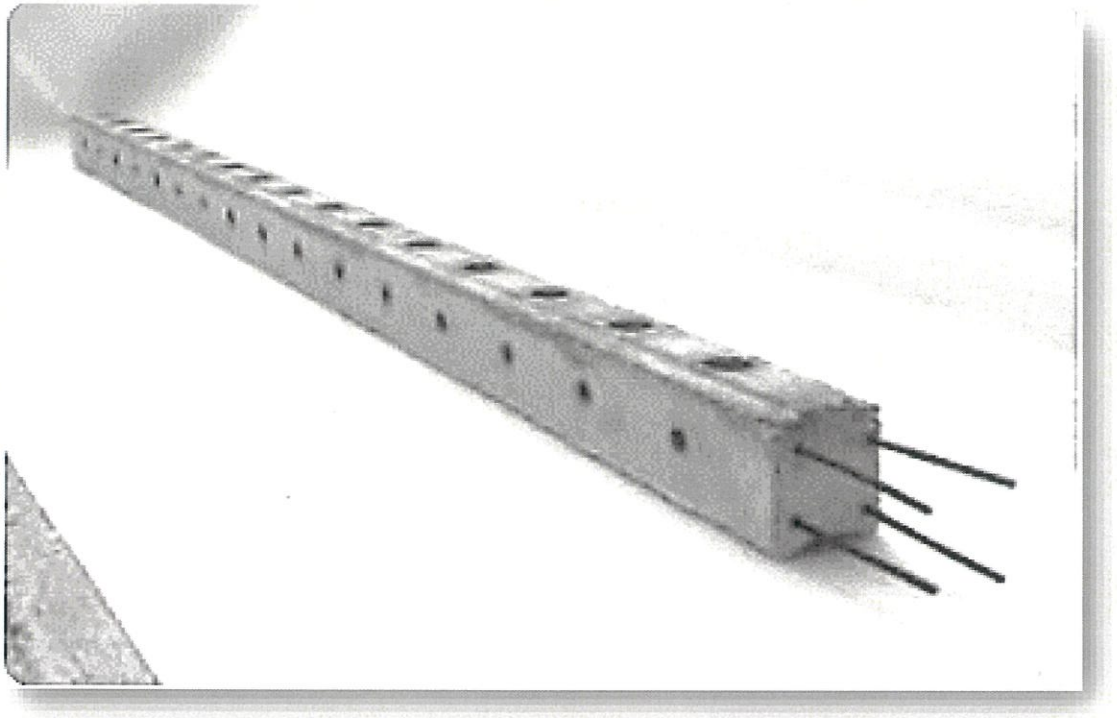
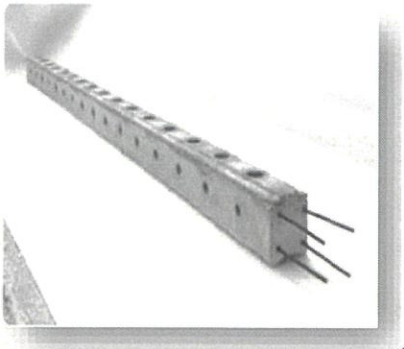


NEO SMART LINTEL™

LINK N LOCK™®

PREFABRICATED INSULATING CONCRETE LINTEL

TEST REPORTS | Updated 2019



NEO SMART LINTEL™

Smart-Hybrid Insulating Concrete Block

ICM Technology (Thailand)
16 Pattanakarn 54
SuanLuang, Bangkok 10250
Tel: +66(0)2 115 2242
Mobile: +66(0)91 070 1936

NEO SMART LINTEL™

SMART-HYBRID INSULATING CONCRETE LINTEL

Description and Characteristics

NEO SMART LINTEL™ are prefabricated Lintel support for wall construction. They are stronger and use LINK N LOCK™ Technology for easy and faster installation.

Create an Effective Heat dispersing wall system (Energy Wall) by using the NEO-SMART LINTEL™ when constructing your wall.

Advantages

- Fire Resistance – Over 4 Hours
- 47% Higher sound Insulation than AAC/CLC
- 80% Faster Installation on average
- Stronger
- Significantly reduce growth of Fungus and Mould
- Requires no skilled labour with LINK N LOCK™ Technology
- Up to 30% energy savings with installation of Energy Wall System™
- Reduced fracture/crack.

Technical Specification

Size	10 X 8 cm. (Length 1-3 meters)
Pieces/Sqm	n/a
Joint Mortar	Lightweight Concrete Joint Mortar
Plaster Mortar	Regular
Color	Grey

AIT

Asian Institute of Technology
Km. 42 Paholyothin Highway, Klong Luang, Pathumthani, Thailand 12120
P. O. Box 4 Klong Luang, Pathumthani 12120 Thailand. Tel. (66-2) 524-5527, 524-6427 Fax. (66-2) 524-5544

STRUCTURAL ENGINEERING LABORATORY

STRUCTURAL ENGINEERING FIELD OF STUDY

SCHOOL OF ENGINEERING AND TECHNOLOGY

TYPE OF TEST: **AXIAL COMPRESSION TEST**

TEST SPECIMEN: One (1) Reinforced Concrete "Neo-Smart Lintel" having a size of 80x2,000x100 mm. was given by the client.

CLIENT: **ICM TECHNOLOGY (THAILAND) CO., LTD.**

DATE OF TEST: March 29, 2019

TEST RESULTS:

Sheet No. 1 of 3

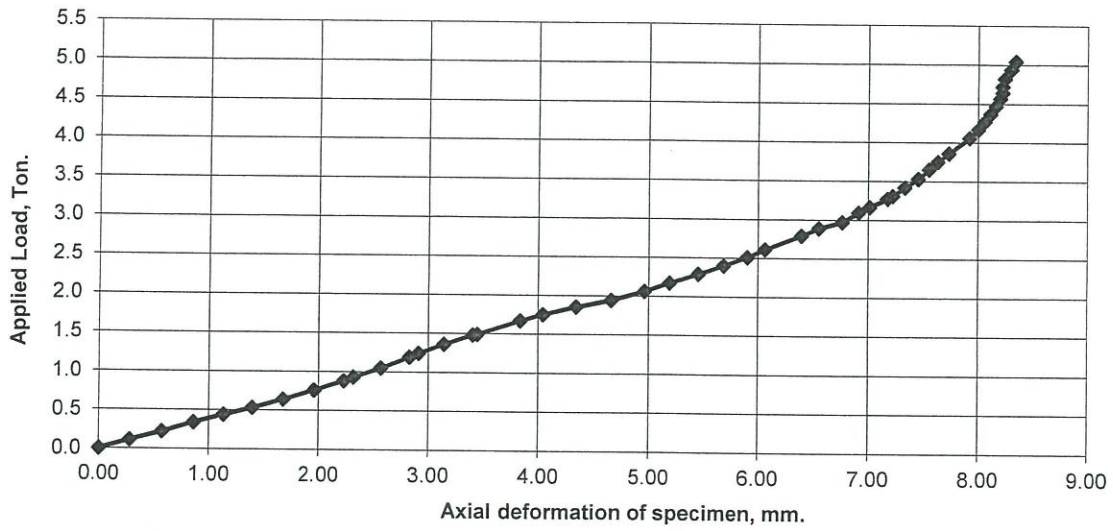


Figure 1 Relationship between applied load and axial deformation of the specimen

Note: This report certifies the adequacy and representative character of the test sample(s) only.

TESTED BY:

MR. SAMWAI SORNSRIDA
TECHNICIAN

CHECKED & APPROVED BY:

DR. ANAWAT CHOTESUWAN
SENIOR LABORATORY SUPERVISOR
April 10, 2019

Specimen No.	Applied Load (Ton)	Axial Deformation (mm)	Remark
1	0.00	0.00	
	0.11	0.28	
	0.22	0.57	
	0.34	0.86	
	0.44	1.13	
	0.53	1.39	
	0.64	1.67	
	0.76	1.96	
	0.88	2.23	
	0.93	2.32	
	1.05	2.57	
	1.19	2.83	
	1.24	2.91	
	1.36	3.14	
	1.48	3.40	
	1.49	3.44	
	1.67	3.83	
	1.75	4.04	
	1.85	4.34	
	1.94	4.66	
	2.06	4.96	
	2.17	5.19	
	2.29	5.45	
	2.40	5.68	
	2.51	5.90	
	2.61	6.06	
	2.79	6.39	
	2.89	6.55	
	2.97	6.76	
	3.09	6.91	
	3.16	7.01	
	3.27	7.17	
	3.31	7.22	
	3.42	7.33	
	3.53	7.45	
	3.65	7.55	
	3.75	7.63	
	3.86	7.73	
	4.06	7.92	
	4.17	8.00	
	4.27	8.06	
	4.37	8.11	
	4.47	8.16	
	4.57	8.20	
	4.64	8.22	
	4.72	8.22	
	4.82	8.24	
	4.94	8.30	
	5.04	8.34	Displacement gauges were removed
	9.62	-	Ultimate load

ASIAN INSTITUTE OF TECHNOLOGY
AIT
STRUCTURAL ENGINEERING

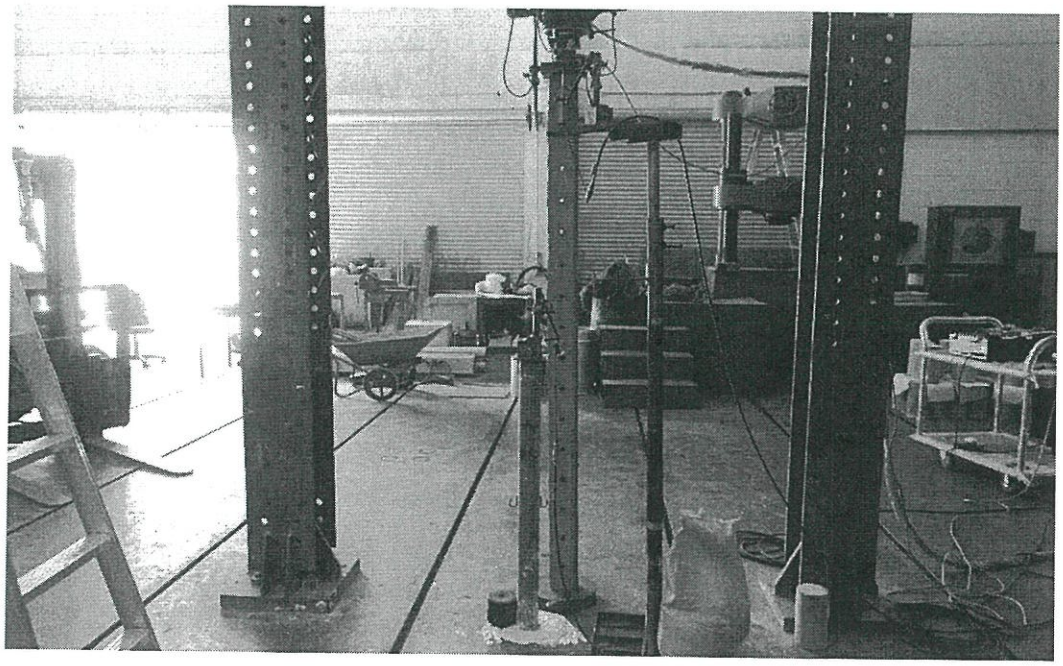


Figure 2 Experimental Set-up for Load-Deformation Test of Specimen

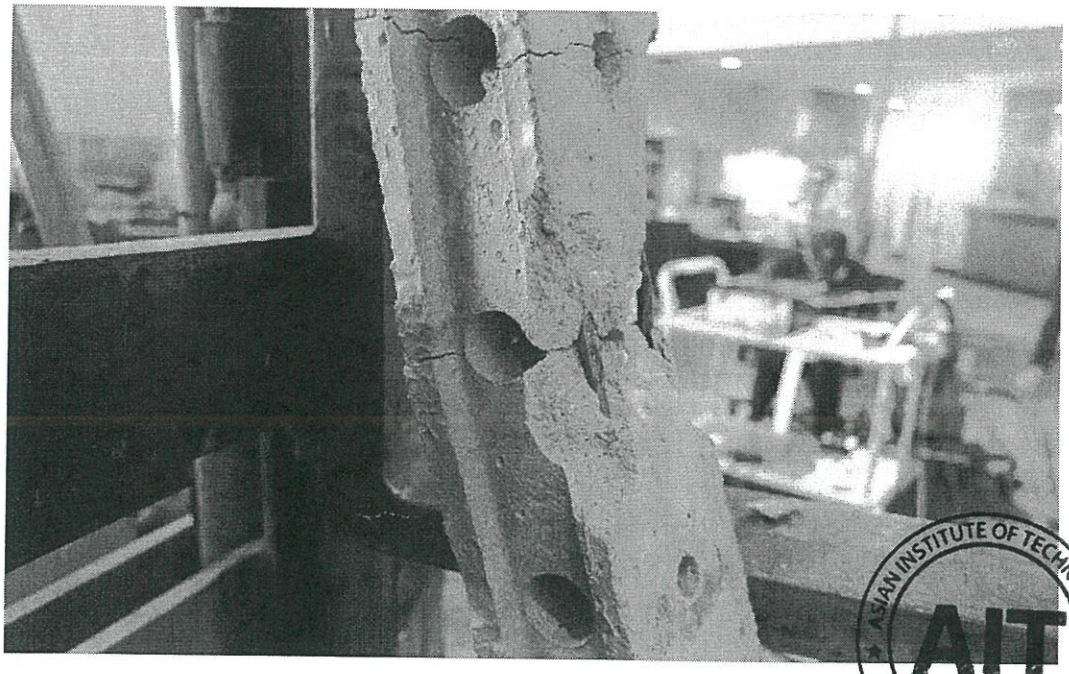


Figure 3 Failure of the specimen

ASIAN INSTITUTE OF TECHNOLOGY
AIT
STRUCTURAL ENGINEERING

AIT

Asian Institute of Technology
Km. 42 Paholyothin Highway, Klong Luang, Pathumthani, Thailand 12120
P. O. Box 4 Klong Luang, Pathumthani 12120 Thailand. Tel. (66-2) 524-5527, 524-6427 Fax. (66-2) 524-5544

STRUCTURAL ENGINEERING LABORATORY

STRUCTURAL ENGINEERING FIELD OF STUDY

SCHOOL OF ENGINEERING AND TECHNOLOGY

TYPE OF TEST: **LOAD - DEFLECTION TEST**

TEST SPECIMEN: One (1) Reinforced Concrete "Neo-Smart Lintel" having a size of 80x2,000x100 mm. was given by the client.

CLIENT: **ICM TECHNOLOGY (THAILAND) CO., LTD.**

DATE OF TEST: March 29, 2019

TEST RESULTS:

Sheet No. 1 of 4

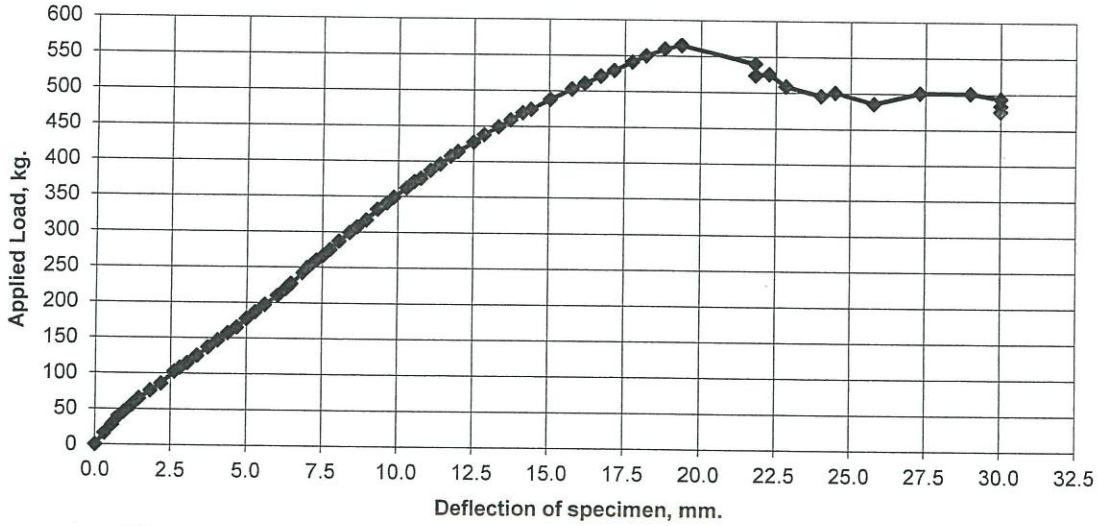


Figure 1 Relationship between applied load and mid span deflection of the specimen

Note: This report certifies the adequacy and representative character of the test sample(s) only.

TESTED BY:

MR. SAMWAI SORNSRIDA
TECHNICIAN

CHECKED & APPROVED BY:

DR. ANAWAT CHOTESUWAN
SENIOR LABORATORY SUPERVISOR
April 10, 2019

ASIAN INSTITUTE OF TECHNOLOGY AIT STRUCTURAL ENGINEERING

Specimen No.	Applied Load (kg)	Converted to Uniform load (kg/m^2)	Deflection at Mid span (mm)	Remark
1	0	0.00	0.00	
	16	148.15	0.31	The span length is 1.80 m.
	28	259.26	0.56	
	40	370.37	0.79	
	46	425.93	0.95	
	56	518.52	1.23	
	65	601.85	1.45	
	76	703.70	1.82	
	86	796.30	2.19	
	103	953.70	2.61	
	108	1,000.00	2.81	
	115	1,064.81	3.05	
	125	1,157.41	3.37	
	137	1,268.52	3.72	
	147	1,361.11	4.04	
	157	1,453.70	4.37	
	165	1,527.78	4.67	
	177	1,638.89	4.98	
	187	1,731.48	5.28	
	197	1,824.07	5.59	
	210	1,944.44	6.01	
	220	2,037.04	6.28	
	227	2,101.85	6.43	
	242	2,240.74	6.83	
	249	2,305.56	7.01	
	260	2,407.41	7.30	
	267	2,472.22	7.53	
	275	2,546.30	7.76	
	287	2,657.41	8.04	
	299	2,768.52	8.40	
	307	2,842.59	8.64	
	317	2,935.19	8.95	
	332	3,074.07	9.32	
	341	3,157.41	9.62	
	349	3,231.48	9.85	
	362	3,351.85	10.28	
	371	3,435.19	10.52	
	376	3,481.48	10.75	
	387	3,583.33	11.07	
	396	3,666.67	11.38	
	407	3,768.52	11.73	
	414	3,833.33	11.97	
	427	3,953.70	12.48	
	438	4,055.56	12.84	
	449	4,157.41	13.31	
	459	4,250.00	13.71	
	469	4,342.59	14.11	
	474	4,388.89	14.40	
	488	4,518.52	15.04	
	503	4,657.41	15.75	
	511	4,731.48	16.18	
	521	4,824.07	16.69	
	529	4,898.15	17.14	
	541	5,009.26	17.74	
	550	5,092.59	18.19	
	560	5,185.19	18.82	

ASIAN INSTITUTE OF TECHNOLOGY
AIT
STRUCTURAL ENGINEERING

Specimen No.	Applied Load (kg)	Converted to Uniform load (kg/m^2)	Deflection at Mid span (mm)	Remark
1	565	5,231.48	19.35	Ultimate load
	540	5,000.00	21.81	
	524	4,851.85	21.82	The span length is 1.80 m.
	526	4,870.37	22.26	
	509	4,712.96	22.82	
	496	4,592.59	24.00	
	501	4,638.89	24.46	
	486	4,500.00	25.76	
	501	4,638.89	27.30	
	501	4,638.89	28.98	
	494	4,574.07	29.99	
	484	4,481.48	29.99	
	476	4,407.41	29.99	

ASIAN INSTITUTE OF TECHNOLOGY
AIT
STRUCTURAL ENGINEERING

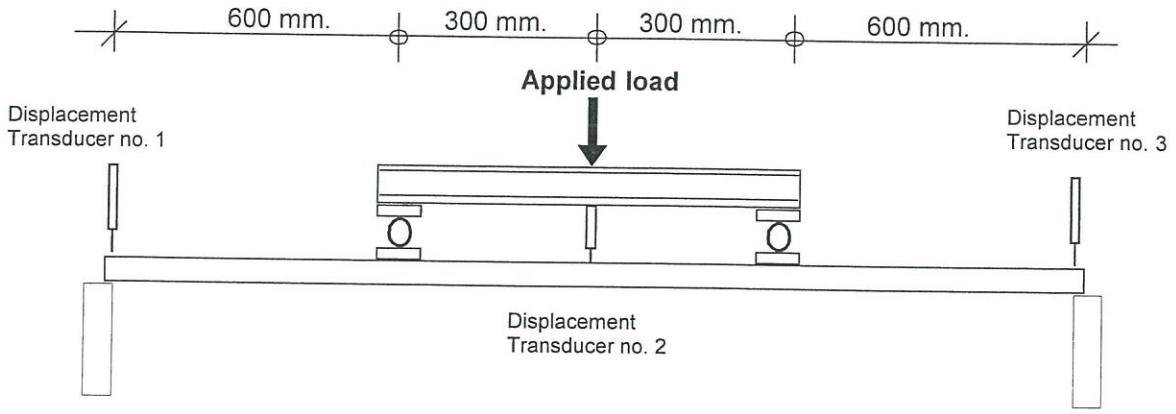


Figure 2 Diagrammatic view of an apparatus for load deflection test

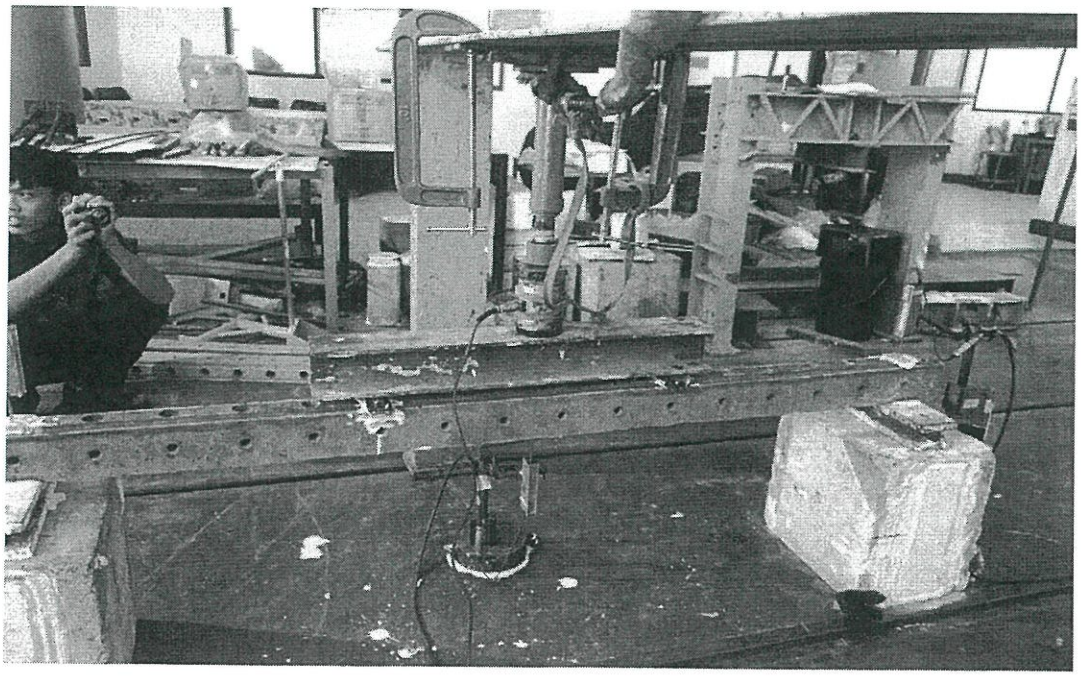


Figure 3 Experimental set-up for load-deflection test of the specimen

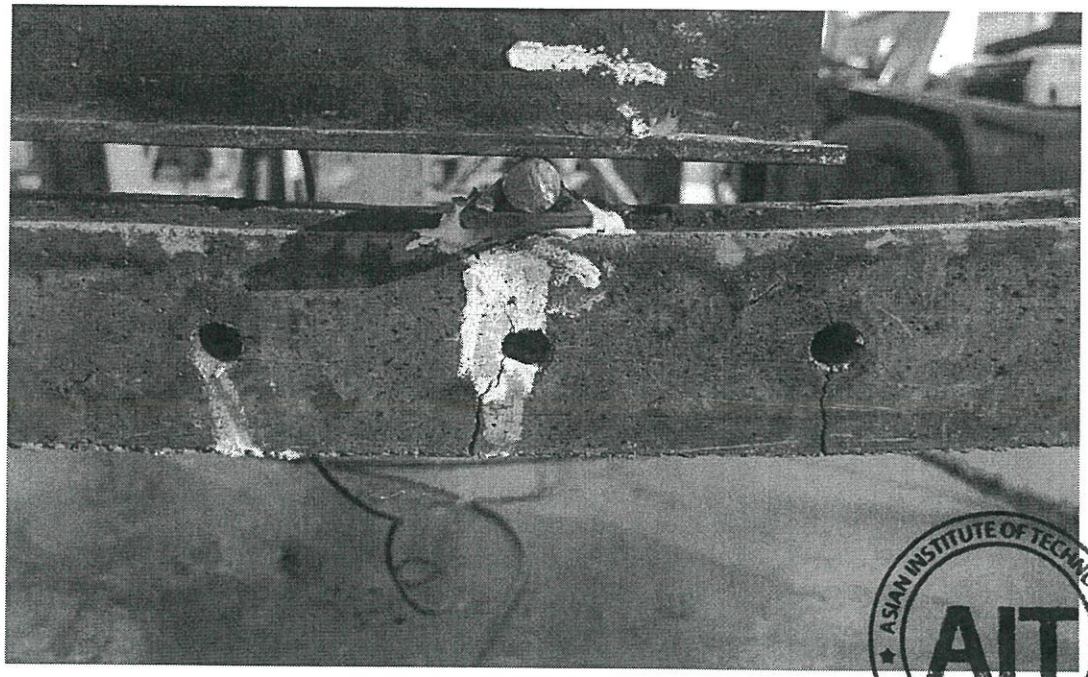


Figure 4 Failure of the specimen

ASIAN INSTITUTE OF TECHNOLOGY
AIT
STRUCTURAL ENGINEERING