



# Programme

for the

# 4<sup>th</sup> International Conference

on

# the use of Geof foam Blocks in Construction Applications



EPS-gruppen



Tekna

## Conference programme for EPS 2011

Sunday 5 <sup>th</sup> of June			
Time	Topic	Activity	
18:00 -	Registration		
19:00 -	Reception	Buffet dinner	
Monday 6 <sup>th</sup> of June			
Time	Topic	Presenter (paper no.)	Paper
08:00 -	Registration continued	<b>Session chair: M. Brandtsegg</b>	
08:30 -	Conference opening	Director General of NPRA	Welcome
	Historical events	G. Refsdal (2)	The first Geoblock Fill - 1972
		T. E. Frydenlund (35)	History of EPS Method in Japan
		R. Aabøe (48)	40 years of experience with the use of EPS Geof foam blocks in road con.
	Cost effectiveness	M. Duškov (10)	Cost comparison of construction methods
10:40 – 11:00	Coffee break	<b>Session chair: M. Duškov</b>	
11:00 -	Case histories	D. Negussey (30)	Use of EPS Geof foam for Support of a Bridge
		G. Papacharalampous (25)	First Application of Expanded Polystyrene in Higway Projects in Greece
		L. Korkiala-Tanttu. (46)	EPS test embankment in Highway E 18 at Muurla
		Y. Sompote (41)	Application of EPS for remedial work on a bridge bearing unit on Bangkok Soft Clay
12:40 – 13:30	Lunch	<b>Session chair: D. Negussey</b>	
13:30 -	Case histories	M. Duškov (13)	Lightweight Embankments with Geof foam (EPS blocks)
		M. Duškov (9)	Hanzelij Railway - Lightweight Structures Behind the Abutments
		S. Spasojevic, et al (44)	The Application of EPS in Geotechnical Practice:
		T. Dantew (8)	Case Histories with EPS Geof foam Fills from Eastern Norway
15:10 – 15:30	Coffee break	<b>Session chair: J. Vaslestad</b>	
15:30 –	Long term monitoring	S. Bartlett. (14)	Ten-Year Performance of I15 Geof foam Embankment at 100 South
		M. Duškov (11)	Response Analysis Based on Two-year Monitoring
		T.A. Stang et al (29)	Monitoring of Long-Term Performance of Early EPS Geof foam Fills in Norway
	Numerical modelling	T. Tewodros (32)	FEM simulation of full scale and laboratory test models of EPS
17:10 -	End of presentations		
18:00 -	Bus departure	Boat cruise/buffet dinner	

## Conference programme for EPS 2011

Tuesday 7 <sup>th</sup> of June			
Time	Topic	Presenter (paper no.)	Paper
		<b>Session chair: K. Flaate</b>	
08:50 -	Seismic design	R. J. Bathurst (7)	Recent Research on EPS Geofoam Seismic Buffers
		S. Bartlett (6)	Applications of EPS Geofoam in Design and Construction of Earthquake Resilient Infrastructure
		G. Athanasopoulos (5)	Seismic Isolation of Earth Retaining Walls using EPS
	Dynamic properties	D. Negussey (26)	Pile Driving Vibration Isolation using Geofoam
10:35 – 10:55	Coffee break	<b>Session chair: G. Baardvik</b>	
10:55 –	Disaster mitigation	T.E. Frydenlund (31)	Disaster Rehabilitation Works with EPS Embankments
	Long term monitoring	J. Vaslestad (36)	Load Reduction and Arching on Buried Rigid Culverts using EPS
	Material properties	L. Lin (42)	Simulation and Analysis of EPS Impaction Test
		D. Negussey (22)	Elastic parameters – perspectives on modulus and Poisson’s ratio for geofoam,
12:35 – 13:30	Lunch	<b>Session chair: A. Emdal</b>	
13:30 –	Material properties	R. Andersen (3)	EPS Geofoam blocks - Material properties and production processes
		S. Bartlett (34)	Dynamic Properties of EPS Geofoam from Cyclic Uniaxial Tests with Initial Deviator Stress
		G. Athanasopoulos (39)	Experimental Investigation of the Mechanical Behavior of EPS Geofoam under Static and Dynamic/Cyclic Loading
		S. Saarelainen (45)	EPStress – The loading capacity of a thick EPS layer
15:10 – 15:35	Coffee break	<b>Session chair: A. Watn</b>	
15:35 –	Material properties	L. Lin (43)	Manufacturing Quality Investigation of EPS blocks
	Chemical composition	A. Håøya (15)	Environmental risk assessment of two flame retardants used in EPS
	Design guidelines	D. Arellano (4)	Overview of the NCHRP Design Guideline
	International. standards	H. Tepper (33)	EU product standards and performance requirements
17:10	End of presentation		
19:00 -	Banquet		

## Conference programme for EPS 2011

Wednesday 8 <sup>th</sup> of June			
Time	Topic	Presenter (paper no.)/Activity	Paper
		<b>Session chair: G. Refsdal</b>	
08:30 –	Case history	K. Aunaas (49)	Recent impressions from EPS projects in Japan
		M. Duškov. (12)	Lightweight Road Embankments for the Crossover of the N207 over the Railway Alphen a/d Rijn-Gouda
	Project information	(J. Solheim)	The Bjørvika project
		T. Johansen (20)	Use of EPS in the Bjørvika project in Oslo, Norway
	Conference closure	R. Aabøe	
10:35 – 10:55	Coffee break		
11:00 – 13:00	Site visit	Bjørvika	
13:00 – 14:00	Lunch		
14:00 –	Departure		Session ends in Bjørvika – (transport by train to Oslo Airport possible)

## List of abstracts from papers received for EPS 2011

No	Author(s)	Title	Topic
1	Aiassa, G.M., Arrúa P.A., Eberhardt, M.G., Argentine	Use of EPS to Support Multifunction Sports Floors on Existing Structures	Case history, numerical modelling
2	Alfheim, S., Flaate, K., Refsdal, G., Rygg, N., Aarhus, K., Norway	The First EPS Geoblock Fill – 1972	Historical events
3	Andersen Roy, Jackon, Norway	EPS Geofoam blocks - Material properties and production processes	Material properties
4	Arellano David, Stark Timothy D., Horvath John S., Leshchinsky Dov, Kafash Masood H. Wang Chuanqi, USA	Overview of the NCHRP Design Guideline for EPS-Block Geofoam in Slope Stabilization and Repair	Design guideline
5	Athanasopoulos-Zekkos., A., Lamote, K., USA, Athanasopoulos, G., Greece	Seismic Isolation of Earth Retaining Walls using EPS Compressible Inclusions – Results from Centrifuge Testing	Seismicdesign, model studies
6	Bartlett, Steven F, Trandafir, Aurelian C., Lawton, Evert C. and Lingwall, Bret N, USA	Applications of EPS Geofoam in Design and Construction of Earthquake Resilient Infrastructure	Seismic design
7	Bathurst, R.J., Zarnani, S., Canada	Recent Research on EPS Geofoam Seismic Buffers	Seismic design
8	Damtew, T., Vaslestad, J., Refsdal, G., Kynbråten, T-A., Norway	Case Histories with EPS Geofoam Fills from Eastern Norway	Case history
9	Duškov, M., (InfraDelft BV) Hogerwerf, J., (v.o.f. Combinatie Hanzelijn NL), The Netherlands	Hanzelijn Railway - Lightweight Structures Behind the Abutments of KW176/KW178 Crossovers	Case history
10	Duškov, M., (InfraDelft BV) Waarts, P.H., TNO Bouw en Ondergrond, The Netherlands	Cost Comparison of Construction Methods for Highway Widening	Cost effectiveness
11	Duškov, M., (InfraDelft BV), The Netherlands	Two-year monitoring on lightweight structures with eps geofoam	Long term monitoring
12	Duškov, M., Nijhuis, E., The Netherlands	Lightweight Road Embankments for the Crossover of the N207 over the Railway Alphen a/d Rijn-Gouda	Case history
13	Duškov, M., Nijhuis, E., The Netherlands	Lightweight Embankments with Geofoam (EPS blocks) for the Eindhoven by-pass 14 Highway above Existing Sewers	Case history, numerical modelling
14	Farnsworth Clifton, Stuedlein Armin, Bartlett Steven and Negussey Dawit, USA	Construction and Long-Term Performance of Transportation Infrastructure Constructed Using EPS Geofoam on Soft Soil Sites in Salt Lake Valley, Utah	Long term monitoring
15	Håøya, Arnt-Olav Ecoloop, Norway	Environmental risk assessment of two flame retardants used in EPS road construction plates.	Chemical composition
16	Herle Vitezslav, Arcadis Geotechnika, Czech Republic	Design and monitoring of EPS embankment on D1 near Ivanovice in the Czech Republic	Case history, Long term monitoring

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No	Author(s)	Title	Topic
18	Kubota, T., Japan	Case History in Japan	Case history
20	Lied O.K., Johansen T., Røed S., Norway	Use of EPS in the Bjørvika project in Oslo, Norway	Case history
21	Murillo, C., Thorel, L., Caicedo, B., Colombia	Isolation from Ground Vibrations with Geofoam Barriers: Centrifuge Modelling	Theoretical modelling
22	Negussey Dawit, USA	Elastic parameters – perspectives on modulus and Poisson’s ratio for geofoam	Material properties
25	Papacharalampous, G., Sotiropoulos, E., Greece	First Application of Expanded Polystyrene in Highway Projects in Greece	Case history
26	Radhakrishnan Karthikeyan and Negussey Dawit, USA	Pile Driving Vibration Isolation using Geofoam	Dynamic properties
27	Radhakrishnan Karthikeyan and Negussey Dawit, USA	Seismic Stability Modeling and Analyses of Geofoam Embankments	Seismic design
28	Shinntani, M., (Kaneka KENTEC CO,Ltd.), Japan	Embankment Constructions Applying Buoyancy-Resistant EDO-EPS blocks	Buoyancy
29	Stang, T.A., Lindqvist, K., Andersen, L.M., Tjernsbekk, J.A., Aabøe, R., Vaslestad, J., Refsdal, G., Norway	Monitoring of Long-Term Performance of Early EPS Geofoam Fills in Norway	Long term monitoring
30	Stuedlein Armin and Negussey Dawit USA	Use of EPS Geofoam for Support of a Bridge	Case history
31	Taneichi, K., (OKASAN LIVIC CO Ltd.), Japan	EDO-EPS Method Applied for Rehabilitation of Expressway Hit by Earthquake	Disaster mitigation
32	Tefera Tewodros, Aabøe Roald, Bruun Hermann, Aunaas Kristian. Norway	FEM simulation of full scale and laboratory test models of EPS	Numerical modelling
33	Tepper Hans, The Netherlands	EU product standards and performance requirements	International standards
34	Trandafir, Aurelian C, Bartlett, Steven F, Lawton, Evert C, and Erickson, Benjamin A., USA	Dynamic Viscoelastic Properties of EPS Geofoam from Cyclic Uniaxial Tests with Initial Deviator Stress	Material properties
35	Tsukamoto, H., Japan	History of R&D and Design Code for EDO-EPS Method in Japan	Historical events
36	Vaslestad, J., Wiman, L., Sayd, M.S., Johansen, T.H., Norway	Load Reduction and Arching on Buried Rigid Culverts using EPS Geofoam. Design Method and Instrumented Field Tests	Arching effects Long term monitoring
38	Venmans, A., Kwast, E., The Netherlands	Life Cycle Costs Approach for Optimizing Transition Zones of Regional and National Roads in the Netherlands	Life cycle costs

## List of abstracts from papers received for EPS 2011

No	Author(s)	Title	Topic
39	Xenaki, V.C., Athanasopoulos, G.A., Greece	Experimental Investigation of the Mechanical Behavior of EPS Geofoam under Static and Dynamic/Cyclic Loading	Material properties
41	Youwai Sompote, Kongkitkul Warat, and Sripobink Thitikorn, Thailand	Application of EPS for remedial work of bridge bearing unit on Bangkok Soft Clay : A case study	Case history, problem mitigation
42	Lin Lee-kuo, Cheng Cho-Jen, Chi Wei-Chieh, Taiwan	Simulation and Analysis of EPS Impaction Test	Material properties
43	Lin Lee-kuo, Sasaki Kenji, Chiou Shang-Juin, Taiwan	Manufacturing Quality Investigation of EPS Block with Homogeneous Test	Material properties
44	Spasojevic S., Mitrović Petar, Vujanić Vladeta, Berisvaljević Z., Jelisavac B., Serbia	The Application of EPS in Geotechnical Practice: A case study from Serbia	Case history
45	Saarelainen Seppo, Finland	EPStress – The loading capacity of a thick EPS layer	Material properties
46	Korkiala-Tantt L., Juvankoski M., Kivikoski H., Finland	EPS test embankment In Highway E18 at Muurla	Long term monitoring
48	Aabøe R., Frydenlund T.E., Norway	40 years of experience with the use of EPS Geofoam blocks in road construction	Long term monitoring
49	Aunaas K., Norway	Recent impressions from EPS projects in Japan	Case history

**The conference is organized by:**

The Norwegian Public Roads Administration



**Statens vegvesen**



Secretariat: **Tekna** –

**The Norwegian Society of Chartered Technical and Scientific Professionals**

**Sponsor:**

**EPS-gruppen**, an association of Norwegian producers and distributors of EPS products

