

References to earlier asphalt core dams built by Veidekke

Name	Country	Dam volume	Height	Asph.volume	Altitude top	Constr. period
Storvatn	Norway	10 mill m ³	95 m	49000 m ³	1055 m	1981–1987
Riskallvatn	Norway	1.2 mill m ³	45 m	8000 m ³	985 m	1983–1986
Berdalsvatn dam	Norway	1 mill m ³	64 m	6800 m ³	1066 m	1986–198
Styggevatn dam	Norway	2.5 mill m ³	52 m	15275 m ³	1206 m	1987–1990
Queen Valley dam	Jersey	0.25 mill m ³	25 m	2100 m ³	40 m	1990–1991
Storglomvatn dam	Norway	5.3 mill m ³	125 m	22500 m ³	591 m	1993–1997
Holmvatn dam	Norway	1.2 mill m ³	56 m	7000 m ³	591 m	1993–1997
Urar dam	Norway	0.14 mill m ³	40 m	1400 m ³	1180 m	1996–1997
Ceres dam	South Africa	0.65 mill m ³	60 m	4500 m ³	646 m	1997–1998
Mao Ping Xi dam	China	12 mill m ³	95 m	48500 m ³	186 m	1998–2003
Miduk dam	Iran	0.4 mill m ³	43 m	4000 ³	2333 m	2004–2006
Mora de Rubielos dam	Spain	0.16 mill m ³	34 m	1700 m ³	1126 m	2004–2005
Murwani Main dam	Saudi Arabia	5.35 mill m ³	90 m	23800 m ³	244 m	2006–2009
Murwani Saddle dam	Saudi Arabia	0.65 mill m ³	30 m	3700 m ³	244 m	2006–2008
Nemiscau 1 dam	Canada	0.05 mill m ³	15 m	700 m ³	300 m	2008
Kjosnesfjorden Main dam	Norway	0.1 mill m ³	25 m	1400 m ³	1004 m	2008
Kjosnesfjorden Saddle dam	Norway	0.06 mill m ³	20 m	600 m ³	1004 m	2008
Knezovo dam	Macedonia	1.6 mill m ³	85 m	8400 m ³	1065 m	2008–2010
Shur River Main dam	Iran	2.9 mill m ³	80 m	16000 m ³	2364 m	2009–2011
Shur River Saddle dam	Iran	0.05 mill m ³	27 m	2000 m ³	2364 m	2009–2011
Foz do Chapeco dam	Brazil	1.5 mill m ³	48 m	17000 m ³	268 m	2009–2010
La Romaine 2 Main dam	Canada	4.4 mill m ³	106 m	16500 m ³	247 m	2012–2013
La Romaine 2 Dike A2	Canada	0.08 mill m ³	31 m	1030 m ³	247 m	2012–2012
La Romaine 2 Dike B2	Canada	0.07 mill m ³	26 m	713 m ³	247 m	2011–2012
La Romaine 2 Dike D2	Canada	0.7 mill m ³	45 m	6190 m ³	247 m	2011–2012
La Romaine 2 Dike E2	Canada	0.2 mill m ³	38 m	2170 m ³	247 m	2011–2012
La Romaine 2 Dike F2	Canada	2.2 mill m ³	80 m	10600 m ³	247 m	2012–2013
Jirau dam	Brazil	2 mill m ³	63 m	17000 m ³	93 m	2011–2012
Cetin dam	Turkey	8,5 mill m ³	160 m	35000 m ³	825 m	2013–2015
Tabalah dam	Saudia Arabia	1.04 mill. m ³	49 m	8000 m ³	1328	2014
La Romaine-1 Dam	Canada	0.562 mill. m ³	40 m	8000 m ³	85	2014–2015

REFERENCE LIST

Afsari-Rad, V.: Experiência em Projeto e Construção de Núcleos de Asfalto no Brasil, XXIX Seminário Nacional de Grandes Barragemens, Porto de Galinhas, abril 2013.

Alicescu, V., Tournier, J.P., Vannobel, P., Moore, V. (2011): Design and construction of Nemiscau-1 Dam, the first ACC dam in North-America, Proceedings of the American Association on Dams, 2010 Annual Conference, San Diego, CA.

Hydropower & Dams (2013): Asphalt Concrete Core Dams, Listing in H&D World Atlas and Industry Guide.

Höeg, K.: Transverse Cracking in Embankment Dams-A Literature Review and Finite Element Study, Report 532060.1, Norwegian Geotechnical Institute (NGI): March 1995.

ICOLD (1992): Bituminous Cores for Fill Dams, International Commission on Large Dams, Bulletin 84, Paris, France.

Kolo-Veidekke (2002): Asphalt Core Embankment Dams, The Crack Self-healing Properties of Asphalt Concrete in Hydraulic Structures, Report, Oslo Norway.

Saxegaard, H. (2002): Asphalt Core Dams: Increased Productivity to Improve Speed of Construction, Hydropower & Dams, 9:6 pp.72-74.

Schönian, E. (1999): The Shell Bitumen Hydraulic Engineering Handbook, Thomas Telford, London U.K.

Wang, W.(2008): Research on the Suitability of Asphalt Concrete as Water Barrier in Dams and Dikes, PhD Thesis, Department of Geoscience, University of Oslo, AiT e-dit AS, Norway.

Wang, W. and Höeg, K.: Developments in the design and construction of asphalt core dams, First International Symposium on Rockfill dams, 2009, Chengdu, China

Wang, W., Zhang,Y., Zhu,Y. and Höeg, K. (2012): The Asphalt Core Embankment Dam: An Attractive Alternative, ICOLD Congress, Symposium, June 2012.

Alicescu, V. and Tournier, J.P. (2012): The Environment-friendly Development of La Romaine Complex, Situated in Northern Quebec, Canada, 24th ICOLD Congress Q.92, Kyoto, Japan.

Creegan, P.J and Monismith, C.L. (1996): Asphalt Concrete Water Barriers for Embankment Dams, ASCE Press, USA.

Höeg, K. (1993): Asphalt Concrete Core for Embankment Dams, Stikka Press, Norway, ISBN 82-546-0163-1.

Höegh, K. (2005): Earthquake Resistance of Asphalt Core Embankment Dams, Norwegian Geotechnical Institute (NGI), Report No. 20051031.

Jones, G.A. and White, A.C.: Design and Construction of the Asphalt Concrete Core at Ceres Dam, SRK-Report: June 1999.

Rienössel, K (1973): Embankment Dams with Asphaltic Concrete Cores, Experience and Recent Test Results, 11th ICOLD Congress, 3, pp 801-8016.

Saxegaard, H.: Uso de Asfalto na Vedação Inova Construção de Barragem, O Empreiteiro, Brasil, Junho 2010, N° 487.

Tschernutter, P. (1997): Influence of Soft Rockfill Material on a Central Bituminous Concrete Membrane, Non- Soil Water Barrier for Embankment Dams, 17th USCOLD Lecture Series, Proceedings, pp.101-115.

Wang,W. and Höeg, K. (2011): Cyclic Behaviour of Asphalt Concrete Used as Impervious Core in Embankment Dams, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, 137:5. pp.536-544.

Wang,W., Höeg, K. and Zhang, Y. (2010): Design and Performance of the Yele Asphalt Core Rockfill Dam, Canadian Geotechnical Journal, 47:12,pp.1365-1381.