

Single-layer armouring

List of References by CLI and its partners:

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Baird & Associates

Project N°	SINGLE LAYER ARMOUR TECHNIQUE Projects	Type of unit ACCROPODE™: ACC ACCROPODE™ II : ACC II CORE-LOC™: CL ECOPODE™: ECO	Unit size used (m3)	Year	Water depth h(m)
345	India – Udangudi captive coal jetty – Tamil Nadu - construction of the Udangudi captive coal jetty. Near to 6 000 ACCROPODE™ II units sized 4.0 m ³ will be cast in the next months and placed over the jetty.	ACC II	4	2018	9.7
343	India - Swan LNG Port Terminal – Jafrabad – Gujarat state. Given the importance of the structure, the harbour is protected by a 2.2 km long main breakwater protected with ACCROPODE™ II blocks. The number of blocks to be placed is 15 000 blocks.	ACC II	6 / 10 / 12	2018	-18
342	Kuwait - Funaitis Marina - The project is located in the Funaitis Club in Kuwait City. The new marina will house around 125 yachts of different sizes. The port is protected by a 760 meter long breakwater protected with 7 000 ACCROPODE™ II blocks.	ACC II	1	2018	-7
339	Malaysia - New deep water terminal at Kuantan – remaining works for the breakwater (ch 00 to ch 3600). Bauxite ore import port. Breakwater cover on port side and lee side with ACCROPODE™ II armour units. The port is located in Kuantan city. The breakwater is 4,6km long.	ACC II	2 / 4	2018	-14
333	Lebanon - Jounieh Cruise port Phase I - Construction of a new Cruise port and a tourism development area. The main breakwater amour is protected by 3 693 ACCROPODE™ II units.	ACC II	6 / 9 / 16	2017	16
331	India – Chhara Port Project - It is a multi cargo port District of Gujarat. The development includes the construction of a 4.15 km long island breakwater protected with ACCROPODE™ II units. The estimated number of ACCROPODE™ II units to be placed on this project is 40 000 units.	ACC II	8/ 16	2017	-9
329	Morocco – Dkhila – Dkhila Bay - Project fishing port in Dkhila Bay located about 700 km south of Layoune in the Sahara. The port is protected by a dike stabilized by ACCROPODE™ II blocks.	ACC II	1	2017	-4.5
328	Morocco – Rabat Maritime protection of the coastal road Project. It consisted in protecting the road along the Cliff face exposed to the wave with ACCROPODE™ blocks.	ACC II	8	2017	-3.5
326	Malaysia - Kuantan II Compliance Certificate : Certification of the armour layer of the new deep water terminal breakwater at Kuantan Pahang Malaysia for package 1A (breakwater section from Ch3600 to CH4600).	ACC II	4 / 5	2017	12
325	India – Vizhinjam - Vizhinjam International Seaport is developing a deep-water multipurpose seaport 16 km from Thiruvannanthapuram. The port includes a breakwater protected with ACCROPODE™ II.	ACC II	4 / 5 / 6	2017	20.5

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324	Bahrein - Bahrein LNG Import - Offshore breakwater of around 500m in length laying on a quasi-flat seabed at -16.6m and rising at +8.80m CD using 3.0m ³ ACCROPODE™ II units.	ACC II	3	2017	16.6
321	Morocco – Nador West Med – Protection with the ACCROPODE™ II single-layer technique of the leg between the shore and the main caisson breakwater and similarly of the lee breakwater of the NWM Port situated in Betoia Bay. 20 km West of Nador.	ACC II	4 / 6.4 / 10	2017	20
319	Scotland – Protection with the ACCROPODE™ II technique of the two outer breakwaters in Nigg Bay for the construction of Aberdeen's New Port. South of the current port	ACC II	8 / 12 / 16	2017	22
318	Morocco - Lamhiriz Fishing Harbour – The fishing port of Lamhiriz located in Dakhla aims at developing and improving the work conditions of the fishermen. The port is protected by a breakwater protected with ACCROPODE™ blocks.	ACC II	1	2016	3.8
315	Ghana –Tema New Port and Container Terminal - The project is the construction of a 3.6 km long breakwater for the new port and container terminal at Tema in Ghana. The most exposed parts of the breakwater will be protected by ACCROPODE™ II units.	ACC II	2	2016	17
314	Portugal – Azores – Protection and stabilizing works of the Barra Coastal Zone of Graciosa island.	ACC II	3 / 4	2016	7
309	Malaysia – New Deep Water Terminal at Kuantan port. Pahang Package 1A – CH 3600 to CH 4627. The project consists of construction of the last kilometre of the 4,6km breakwater of the new deep water terminal at Kuantan. The new deep water terminal at Kuantan Phase 1, is built with a basin depth of 16 meters, 400 meters berth and 20 hectares of cargo yard adjacent to it to accommodate conventional ships and cargoes.	ACC II	4 / 5	2016	12
302	Cape Verde – Palmeira Phase II - The new port of Palmeira is located on Sal Island in Cape Verde country and is located at the immediate vicinity of the existing Palmeira port on the western coast of the Island	ACC II	4 / 6 / 10	2015	18
297	Romania - Eforie North Area And Tomis South Area - Protection and rehabilitation of the Southern Port of Romanian Black Sea coast – RECOstruction of several groynes located at Tomis South and Eforie North on the coast of the Black sea at Constanta.	ACC II	1	2015	4

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295	Morocco – New power station at Safi – construction of three maritime structure as a rubble mound breakwater to protect intake and outfall cooling water system protected by single layer ACCROPODE™ II units.	ACC II	2 / 12 / 20	2015	10
290	Reunion - Nouvelle Route du Littoral – « La Possession Motorway Junction » Lot MT5.1. Building of a 12km long off shore dual carriage way between Le Port and Saint Denis. The road is supported along 6km by a breakwater protected with ACCROPODE™ II units. The Lot 5.1 consists in building the protections located in la Possession and in la Grande Chaloupe.	ACC II	6 / 8 / 11	2015	12
287	Romania - Constanza Beaches Rehabilitation Reconstruction of the several groynes located at Tomis North and Tomis Centre on the coast of the Black sea at Constanta.	ACC II	1	2014	4
286	Reunion - Nouvelle Route du Littoral – « La Possession Motorway Junction. Lot MT2 Building of a 12km long of off shore dual carriage way between Le Port and Saint Denis. The road is supported along 6km by a breakwater protected with ACCROPODE™ II units. The Lot 2 consists in building a new off shore round about.	ACC II	6	2015	8
282	Kuwait - Police Officers Club & Marina - Construction of a main breakwater of 500.0.0m long and a lee breakwater of 300.0.0m. The maximum depth on roundheads is - 5.0.0m.	ACC II	2	2014	5
280	Uruguay – Sayago LNG Terminal – Offshore breakwater of around 2000.0.0m in length laying on a quasi-flat improved seabed at -6.0.0m and rising at +8.5.0.0m CD using 3.0.0m ³ ACCROPODE™ II units. This is the first LNG import terminal in Uruguay.	ACC II	3	2013	6
275	Benin - Cotonou.- Extension of the Western breakwater for the exploitation of the South wharf at the Port of Cotonou.	ACC II	3 / 4	2013	10
274	Morocco – Safi New Port - Building two rubble mound breakwaters for the new polyvalent port of Safi.	ACC II	6 / 12	2013	17
271	Malaysia - Kuantan Deep water Port Expansion 4600.0.0m long breakwater on the Eastern coast of Malaysian Peninsula. This breakwater is to protect the new deep water port developed by the ECERDC for multipurpose use.	ACC II	2 / 4 / 5	2014	11
266	Romania - Constantza Port expansion – Extension of the main northern breakwater by 1050 m in deep water. The new primary armour consists of 9.0.0m ³ (trunk), 12.0.0m ³ (head) and 3.0.0m ³ (rearside) ACCROPODE™ II units	ACC II	3 / 6 / 12	2013	20

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264	Kuwait – KOC Small Boat Harbour – Marine facilities upgrading oil project. consisting in two new small boat harbours south of Kuwait City. The north harbour is new and the south harbour is expanded. new breakwaters armoured with 3.0.0m³ ACCROPODE™ II	ACC II	3	2013	11
258	Australia – Wheatstone LNG plant - Marine facilities located at Ashberton north	ACC II	3 / 4	2012	6
256	Morocco – Tarfaya - Extension of the Port of Tarfaya including 1207 m of protection	ACC II	2 / 4	2012	11
254	Morocco – Tanger Pêche - New fishing harbour near Tangiers city.	ACC II	8	2012	12
248	UAE – Abu Dhabi - Zakum Oil field - Upper Zakum most exposed artificial islands N and W aimed at housing drilling platforms - ACCROPODE™ II revetments about 1500 ml each	ACC II	4	2011	11
245	UAE – Abu Dhabi – SARB – Satah Al Razboot field development artificial L1 and L2 islands - ACCROPODE™ II armoured revetments about 1500 ml each	ACC II	3	2011	11
244	Cape Verde – Vale De Cavaleiros – Northern expansion of the existing multi-purpose port located west of the Fogo Island (south of the Cape Verde Archipelago) . The scope of works include the extension of the main breakwater and the creation of a lee breakwater up north in -5 m waterdepth	ACC II	3 / 6	2011	5.5
235	France - Cerbere RECONstruction of existing structures with rocks damaged during Dec. 08 storm using ACCROPODE™ II units	ACC II	9	2010	11
231	India – Kattupalli - This new port is located north of Chennai on the East coast of India - The total length of the breakwaters is over 2 km . protected on their trunk with ACCROPODE™ units and on their roundheads with ACCROPODE™ II (second generation) units	ACC & ACC II	2.5 / 4 / 6.3	2010	12
228	Benin – Cotonou - extension of the sand-intercepting groin at the Southern port boundary to reduce the sediment transport along the shore and at the port entrance	ACC II	3 / 4	2009	12
217	Morocco – Marchica New layout of the Marchica inlet for a marina development -Two training walls armoured with ACCROPODE™ II. each extending about 500.0.0ml into the sea	ACC II	2 / 4	2008	8.5
200	Italy - Ospedaletti marina - New yacht harbour located near San Reno Liguria - The breakwaters are 1200 m long	ECO & ACC II	4 / 6 / 8	2008	10.6
195	South Korea - Busan Geoje tunnel - Protection of the most exposed part of the immersed tunnel section	ACC II	11 / 15 / 20	2007	22.2

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188	Angola - Dalia UFL spool base jetty - Reinforcement of the existing vertical wall with a rubble-mound protected with ACCROPODE™ II armour units over 300 meters length	ACC II	8	2007	8.6
122	Spain – Coastal protection at Garachico - on the West side of the Tenerife Island	ECO	5.7	2000	0