

RESULTS REPORT OF TEST

Report Nº: IE142209

PETITIONER

D. Gregorio Berná
 BATEIG PIEDRA NATURAL, S.A.
 CAMÍ DE CASTELLA 112, B.º ESTACION
 03660 NOVELDA ALICANTE NIF: A03099405

COMMENTS:

FURTHER INFORMATION:

Specimen/s:

DELIVERY NOTE Nº:	REGISTRATION DATE:	SPECIMEN IDENTIFICATION ACCORDING TO APPLICANT:	MATERIAL:	QUANTITY:	RECEPCIÓN:
72113	23/05/2014	Bateig Beig Hindra-Fantasia	Natural Stone	72 tiles	Sent by the applicant

Test/s Carried out

Nº:	DESCRIPTION	REGULATION:
1	Determination of water absorption at atmospheric pressure	UNE-EN 13755:2008
1	Determination of apparent density and open porosity	UNE-EN 1936:2007
1	Determination of the abrasion resistance	UNE-EN 14157:2005
1	Determination of uniaxial compressive strength	UNE-EN 1926:2007
1	Determination of flexural strength under concentrated load	UNE-EN 12372:2007
1	Determination of rupture energy	UNE-EN 14158:2004
1	Determination of resistance to salt crystallisation	UNE-EN 12370:1999
1	Determination of the slip resistance by means of the pendulum tester	UNE-EN 14231:2004
1	Determination of water absorption coefficient by capillary	UNE-EN 1925:1999
1	Determination of frost resistance	UNE-EN 12371:2011

Paterna, on Friday 18th of July 2014

Signed: D^a Rocío Correoso Cano
Technician of the Natural Stone Laboratory

Signed: Mr. José Manuel Cuevas Castell
Responsible of the Natural Stone Laboratory

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REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF APPARENT DENSITY AND OPEN POROSITY
 UNE-EN 1936 :2007 Apdo.8.1**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

	START	END
Date test	19/05/2014	20/05/2014

	Higher	Lower
Temperature	23,8	20,2

TEST RESULT

Dimensions of the specimens : 50 x 50 x 50 mm

Specimen	1	2	3	4	5	6
Apparent density (kg/m ³)	2280	2250	2250	2250	2260	2240
Open porosity (%)	14,8	15,8	15,7	15,8	15,2	16,0

	AVERAGE
Apparent density (kg/m ³)	2260
Open porosity (%)	15,6

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF UNIAXIAL COMPRESSIVE STRENGTH
 UNE-EN 1926:2007**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

Registration date	06/05/2014
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	START	END
Date test	21/05/2014	22/05/2014

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Height, h (mm)	50,0	50,0	51,0	50,0	50,0	50,0	50,0	50,0	50,0	51,0
Average side (mm)	50	50	50	51	50	50	50	50	50	50
Breaking load, F(kN)	200	160	160	160	200	170	160	170	160	160
Compressive Strength (MPa)	78,1	64,2	65,0	63,0	80,0	66,6	64,4	69,5	63,6	64,7

Mean value of Compressive Strength, (MPa)	68
Standard deviation (MPa)	6
Coefficient of variation, v	0,091

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF FLEXURAL STRENGTH UNDER CONCENTRATED LOAD
 UNE-EN 12372:2007**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Saw
 Sampling realized by : Petitioner

	START	END		Higher	Lower
Preparation date	09/05/2014	13/05/2014	T ^a (°C)	24,7	23,9
Test date	13/05/2014	13/05/2014			

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Span distance <i>l</i> (mm)	248,8	251,2	253,5	254,1	250,5	257,1	254,3	253,4	256,8	256,3
Breaking load, F (N)	3840	3640	3060	2280	3160	3060	3740	3350	3310	2750
Thickness along breaking plane (mm)	49,8	49,9	50,7	50,6	50,2	51,4	50,7	50,8	51,2	49,8
Width along breaking plane (mm)	51,3	51,3	50,2	49,6	51,1	49,8	49,8	49,8	50,7	51,1
Breaking zone	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>	≤ 15% <i>l</i>
Flexural Strength, R _{tf} (MPa)	11,3	10,7	9,0	6,8	9,2	9,0	11,1	9,9	9,6	8,3

Mean value of Flexural Strength, R _{tf} (MPa)	9,5
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Standard deviation, s (MPa)	1,4
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Lower expected value, E (MPa)	6,8
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA: COMMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF WATER ABSORPTION COEFFICIENT BY CAPILLARY
 UNE-EN 1925:1999**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

	START	END
Date test	05/09/2014	08/09/2014

	Higher	Lower
Temperature	25,3	25,1

TEST RESULT

Dimensions (mm) : 50 x 50 x 50 mm

Specimen	1	2	3	4	5	6
Dimensions (Side) (mm)	50,18	50,55	50,04	50,26	50,07	49,94
Water absorption coefficient by capillary (g/m ² .s ^{0,5})	12,428	13,457	11,159	9,519	11,174	11,354
Mean value of water absorption coefficient by capillary (g/m².s^{0,5})	11,515					

ADDITIONAL DATA OF TEST:

COMMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF RESISTANCE TO SALT CRYSTALLISATION
 UNE-EN 12370:1999**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

	START	END
Date preparation	28/05/2014	2/06/2014
Date test	02/06/2014	27/06/2014

TEST RESULT

Specimen	1	2	3	4	5	6
Width (mm)	40,49	39,88	40,42	41,21	40,38	40,05
Thickness (mm)	41,21	41,2	41,23	40,39	40,33	40,33
Length (mm)	40,45	40,6	40,4	40,4	41,35	41,26
Variation of mass ΔM (%)	0,56	-4,47	0,65	-5,38	0,41	-0,24
Mean value of variation of mass ΔM (%)	-1,41					

ADDITIONAL DATA OF TEST :

COMMENTS:

REPORT N°: IE142209

TESTED MATERIAL: Natural Stone

DELIVEY NOTE N°: 72113



Photo 1



Photo 2

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF WATER ABSORPTION AT ATMOSPHERIC
 PRESSURE
 UNE-EN 13755:2008**

Information supplied by the petitioner :

Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Petitioner : Bateig Piedra Natural, S.A
 Anisotropy planes :
 Surface finish : Raw
 Sampling realized by : Petitioner

TEST RESULT

Dimensions of the specimens (mm) : 50 x 50 x 50 mm

Registration date	06/05/2014
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	START	END
Date test	19/05/2014	22/05/2014

	Higher	Lower
Temperature	24,7	22,9

Specimen N°	1	2	3	4	5	6
Dimensions (Lade) (mm)	50,00	50,58	50,44	50,28	50,48	49,87
Water absorption (%)	5,8	5,5	5,8	5,8	5,3	5,9
Water Absorption medium (%)	5,7					

ADDITIONAL DATA OF TEST:

COMMENTS :

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF THE ABRASION RESISTANCE
 UNE-EN 14157:2005**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Honed
 Sampling realized by : Petitioner

TEST RESULT

Dimensions of the specimens : 150 x 150 x 20 mm

Registration date	06/05/2014
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	START	END
Date test	11/06/2014	11/06/2014

Value of calibration	0,3
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PROBETA Specimen	1	2	3	4	5	6
Dimensions (mm)	150,21x149,85x19,89	150,13x150,07x19,95	150,06x150,21x20,28	149,85x150,17x19,98	150,04x150,21x19,98	150,03x150,05x20,2
Dimension of the Groove (mm)	26,0	27,0	26,5	27,0	25,5	26,5

Average Value (mm)	26,44
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ADITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF RUPTURE ENERGY
 UNE-EN 14158:2004**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Honed
 Sampling realized by : Petitioner

TEST RESULT

	START	END
Date preparation	26/05/2014	28/05/2014
Date test	28/05/2014	28/05/2014

TEST RESULT

Specimen	1	2	3	4	5
Width (mm)	199,88	199,81	199,83	200,07	200,3
Thickness (mm)	30,64	30,49	31,01	30,7	31,14
Length (mm)	199,83	200,06	200,24	199,98	199,63
Rupture Energy, W (J)	3	3	3	3	3
Average Rupture Energy (J)	3				

ADDITIONAL DATA OF TEST :

COMMENTS :

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

NATURAL STONE TEST METHODS
DETERMINATION OF FLEXURAL STRENGTH UNDER CONCENTRATED LOAD
UNE-EN 12372:2007

Information supplied by the petitioner :

Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Petitioner : Bateig Piedra Natural, S.A
 Surface finish : Saw
 Sampling realized by : Petitioner
 Dimensions : 300 x 50 x 50 mm

	START	END
Preparation date	09/05/2014	13/05/2014
Test date	09/05/2014	10/09/2014

	Higher	Lower
T ^a (°C)	24,7	23,9

TEST RESULT

Specimen	1	2	3	4	5	6	7	8	9	10
Span distance l (mm)	248,8	251,2	253,5	254,1	250,5	257,1	254,3	253,4	256,8	256,3
Breaking load, F (N)	3840	3640	3070	2280	3160	3060	3740	3350	3310	2750
Thickness along breaking plane (mm)	49,8	49,9	50,7	50,6	50,2	51,4	50,7	50,8	51,2	49,8
Width along breaking plane (mm)	51,3	51,3	50,2	49,6	51,1	49,8	49,8	49,8	50,7	51,1
Breaking zone	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$
Flexural Strength, R _{ff} (MPa)	11,3	10,7	9,0	6,8	9,2	9,0	11,1	9,9	9,6	8,3

Mean value of Flexural Strength, R _{tf} (MPa)	9,5
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Standard deviation, s (MPa)	1,4
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Lower expected value, E (MPa)	6,8
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA: COMMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**TESTING METHODS FOR NATURAL STONE
 DETERMINATION OF FROST RESISTANCE
 UNE-EN 12371:2002**

**DETERMINATION OF FLEXURAL STRENGTH UNDER CONCENTRATED LOAD
 84 CICLES FREEZE/THAW
 UNE-EN 12372:2007**

TEST RESULT

	START	END		Higher	Lower
Preparation date	26/07/2014	10/09/2014	T ^a (°C)	26,8	25,9
Test date	09/05/2014	10/09/2014			

Specimen	11	12	13	14	15	16	17	18	19	20
Span distance l (mm)	256,1	256,7	250,2	247,6	253,8	254,1	256,6	250,9	255,5	257,0
Breaking load, F (N)	4030	3650	3160	3160	4180	2960	3060	3950	3640	3350
Thickness along breaking plane (mm)	51,2	51,3	49,6	49,7	50,8	50,8	51,4	50,1	51,3	51,5
Width along breaking plane (mm)	49,6	49,0	50,6	50,6	50,2	49,3	50,0	51,3	50,3	50,0
Breaking zone	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$	$\leq 15\% l$
Flexural Strength, R_{tf} (MPa)	11,9	10,9	9,5	9,4	12,3	8,9	8,9	11,5	10,5	9,7

Mean value of Flexural Strength, $\overline{R_{tf}}$ (MPa)	10,3
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Standard deviation, s (MPa)	1,3
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Lower expected value, E (MPa)	8,0
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Variation of flexural strength, ΔR_{tf} (%)	-8,4
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Speed load was 0,25 MPa/s.

ADDITIONAL TEST DATA:

COMENTS:

REPORT N°: IE142209
 TESTED MATERIAL: Natural Stone
 DELIVEY NOTE N°: 72113

**NATURAL STONE TEST METHODS
 DETERMINATION OF THE SLIP RESISTANCE BY MEANS OF THE
 PENDULUM TESTER
 UNE-EN 14231:2004**

Information supplied by the petitioner :

Petitioner : Bateig Piedra Natural, S.A
 Petrographic name :
 Trade name of the stone : Bateig Beig Hindra
 Country and place of extraction :
 Anisotropy planes :
 Surface finish : Honed
 Sampling realized by : Petitioner

TEST RESULT

Dimensions of specimens : 200 x 200 x 20 mm

Registration date	06/05/2014
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	START	END
Date test	09/07/2014	09/07/2014

Size of the rubber sliders : 76 mm.

	DRY CONDITIONS					
Specimen identification	1	2	3	4	5	6
USRV (mean value for test specimen)	45	45	43	49	46	47
USRV (of the specimen)	46					

	WET CONDITIONS					
Specimen identification	1	2	3	4	5	6
USRV (mean value for test specimen)	51	53	51	56	54	51
USRV (of the specimen)	53					

COMMENTS:

ADDITIONAL DATE OF TEST: