NELTEX
DEVELOPMENT CO., INC.

REF#: 2013-023

CERTIFICATION

This is to certify that **NELTEX Development Co. Inc.** is producing **Neltex Pressureline uPVC Pipe Series 10** with sizes 63mm, 75mm, 90mm, 110mm, 160mm and 225mm with effective length of 6 meters.

Neltex Pressureline uPVC Pipes are inspected and tested in conformance to PNS 65:1993 Specification for Unplasticized Polyvinyl Chloride (uPVC) Pipes for Potable Water Supply.

Prepared by:

Maricel L. Rostata
QA Supervisor

Approved by:

Armando H. Julva
QA/TS Manager

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PHILIPPINE STANDARD Quality Certification Mark
CERTIFIED Product Quality
TÜV SÜD ISO 9001

NELTEX
DEVELOPMENT CO., INC.

LABORATORY TEST RESULT

REF#: 2013-047

PRODUCT: Neltex Pressureline uPVC Pipe Series 10
REFERENCE STANDARD: PNS 65:1993

A. Dimension

NOMINAL PIPE SIZE	OUTSIDE DIAMETER (mm)		WALL THICKNESS (mm)		REMARKS
	STANDARD	RESULT (mean)	STANDARD	RESULT (mean)	
63mm	63.00 – 63.30	63.15	3.000 – 3.500	3.250	Passed
75mm	75.00 – 75.30	75.18	3.600 – 4.160	3.700	Passed
90mm	90.00 - 90.30	90.28	4.400 – 5.040	4.600	Passed
110mm	110.00 – 110.40	110.20	5.300 – 6.030	5.450	Passed
160mm	160.00 - 160.50	160.08	7.700 – 8.670	7.990	Passed
225mm	225.00 – 225.70	225.35	10.800 – 12.080	11.160	Passed

B. Longitudinal Reversion - ISO 2505

NOMINAL PIPE SIZE	STANDARD REQUIREMENT	RESULT (mean)	REMARKS
63 - 110mm	5.00% maximum after 1 hour at 150°C	2.14%	Passed
160 - 225mm	5.00% maximum after 2 hours at 150°C	1.53%	Passed

C. Resistance to Acetone - ISO 3472

NOMINAL PIPE SIZE	STANDARD REQUIREMENT	RESULT	REMARKS
63 - 225mm	No sign of delamination or disintegration after 2 hours of immersion	No delamination or disintegration	Passed

D. Resistance to External Blows (Impact Test) - ISO 3127

NOMINAL PIPE SIZE	STANDARD REQUIREMENT	RESULT	REMARKS
63 - 225mm	True Impact Rate (TIR) shall not exceed 10% where TIR = total number of breaks / total number of blows	0%	Passed

E. Flattening - ASTM D2241

NOMINAL PIPE SIZE	STANDARD REQUIREMENT	RESULT	REMARKS
63 - 225mm	No evidence of splitting, cracking or breaking when flattened to 40% of the outside diameter	No sign of splitting, cracking or breaking when flattened to 40% of the outside diameter	Passed

F. Hydrostatic Pressure - ISO 1167

NOMINAL PIPE SIZE	STANDARD REQUIREMENT		RESULT	REMARKS
63 - 225mm	Burst Pressure	The pipe shall withstand 3.8MPa for at least 60 seconds without failure	No sign of leaks and burst after testing	Passed
	Short Term Pressure	The pipe shall withstand 3.6MPa for at least 1 hour without failure	No sign of leaks and burst after testing	Passed

We hereby certify that the above physical and mechanical laboratory analysis are true and correct as contained in the quality records of the company.

Test verified by:

Marlcel L. Rostata
QA Supervisor

Noted by:

Arman H. Julva
QA/TS Manager

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PHILIPPINE STANDARD
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TECHNICAL SPECIFICATIONS

PRODUCT	Neltex Pressureline uPVC Pipe Series 10
REFERENCE STANDARD	PNS 65:1993 Specification for Unplasticized Polyvinyl Chloride (uPVC) Pipes for Potable Water Supply

A. DIMENSION

NOMINAL PIPE SIZE	OUTSIDE DIAMETER (mm)	WALL THICKNESS (mm)	EFFECTIVE LENGTH
63mm	63.00 – 63.30	3.000 – 3.500	6 meters
75mm	75.00 – 75.30	3.600 – 4.160	6 meters
90mm	90.00 – 90.30	4.400 – 5.040	6 meters
110mm	110.00 – 110.40	5.300 – 6.030	6 meters
160mm	160.00 – 160.50	7.700 – 8.670	6 meters
225mm	225.00 – 225.70	10.800 – 12.080	6 meters

B. PHYSICAL PROPERTIES

PROPERTY	STANDARD REQUIREMENT		TEST METHOD
Vicat Softening Temperature	minimum 76°C		ISO 2507 Unplasticized Polyvinyl Chloride (PVC) pipes and fittings – Vicat Softening Temperature
Longitudinal Reversion	wall thickness ≤ 8mm	5% maximum after 1 hour at 150°C	ISO 2505 Thermoplastics Pipes – Longitudinal Reversion
	wall thickness > 8mm	5% maximum after 2 hours at 150°C	
Water Absorption	maximum 40 g/m^2		ISO 2508 Unplasticized Polyvinyl Chloride (PVC) pipes and fittings – Water Absorption – Determination and specification

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PROPERTY	STANDARD REQUIREMENT		TEST METHOD
Resistance to Acetone	No sign of delamination or disintegration after 2 hours of immersion		ISO 3472 Unplasticized Polyvinyl Chloride (PVC) Pipes – Specification and Determination of Resistance to Acetone
Resistance to Sulfuric Acid	Mass of specimen shall not increase by more than 0.316g nor decrease my more than 0.013g		ISO 3473 Unplasticized Polyvinyl Chloride (PVC) Pipes – Effect of Sulphuric Acid – Requirement and test method
Hydrostatic Pressure	Burst Pressure	The pipe shall withstand 3.8MPa for at least 60 seconds without failure	ISO 1167 Thermoplastics Pipes, Fittings and Assemblies for the Conveyance of Fluids - Determination of the Resistance to Internal Pressure
	Short Term Pressure	The pipe shall withstand 3.6MPa for at least 1 hour without failure	
Resistance to External Blows (Impact Test)	True Impact Rate (TIR) shall not exceed 10% where TIR = total number of breaks / total number of blows		ISO 3127 Thermoplastics pipes – Determination of Resistance to External Blows – Round-the-clock Method
Flattening	No evidence of splitting, cracking or breaking when flattened to 40% of the outside diameter		ASTM D2241 Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)

Prepared by:

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