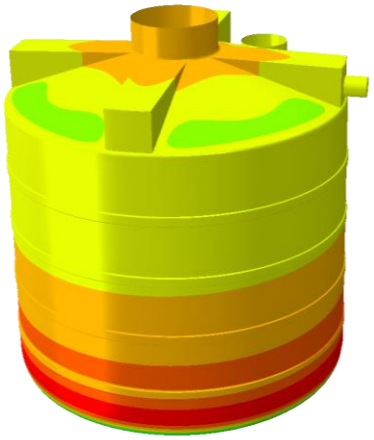
MATRIX | ENGINEERS OF INNOVATION

Rotomoulders

OUR SERVICE FOCUS

For rotomoulders of above ground, buried and partially buried PE tanks Matrix has extensive experience in code compliance analysis to AS/NZS4766:2020. With our knowledge of the behaviour of PE under short- and long-term loads, we can analyse all your rotomoulded products to check behaviour under any imposed loading regime.



SERVICE / SUMMARY

Detailed structural analysis using FEA, including static strength, buckling and creep assessment. Non-linear capability to account for complex effects such as contact and large displacements. Advanced CFD to understand fluid induced loads (sloshing, clean-in-place…etc).

- Specialists in Finite Element Analysis (FEA) and code compliance checks to AS/NZS 4766:2020 and AS/NZS 1546:Part 1
- Access to research data on the creep behaviour of PE
- On the standards committee which released the latest update to AS/NZS 4766
- Proven seamless collaboration with rotomoulders over the years

PROBLEMS / SOLUTIONS

Matrix provides solutions for Rotomoulders requiring confidence in the structural performance on their designs:

Problem	Solution
Will the expert witness have niche knowledge in the area of modelling product performance, failure or checking the original design was code compliant?	Matrix have a strong reputation built over the past 35 years in using leading edge simulation tools to evaluate product performance and ensuring code compliance.
What shot weight and wall thickness distribution is required for compliance to AS/NZS 4766 or AS/NZ 1546?	Matrix has provided code compliance checks for over 200 PE tanks including design of seismic restraints.
How do I avoid paying for costly analysis software, staff training and retainment?	Matrix prides itself on offering value for money and its ability to partner with our customers to achieve results.
How do I design for creep in the product I am designing?	Matrix has collaborated with resin suppliers to understand the creep mechanism and to develop time dependent creep laws.

CUSTOMERS / EXPERIENCE

- Completed code compliance checks for rotomoulders in NZ, Australia, Europe and the UK.
- Appeared as an expert witness for a PE product failure
- On the standards committee updating AS/NZS 4766

OUR TEAM

Meet our highly qualified and experienced engineering analysts:

Don Campbell, BSc, BE(Hons), PhD, CMEngNZ, CPEng (Mech), IntPE, NAFEMS Adv Reg Analyst, 45 yrs exp
Paul Bosauder, BE(Hons), NAFEMS Adv Reg Analyst, Advanced CFD, composites & non-linear FEA, 20 yrs exp
James Hamilton, BE(Hons), PhD, CMEngNZ, CPEng (Mech), IntPE, composites & non-linear FEA, 20 yrs exp
Kava Crosson-Elturan, BE(Hons), (Mech, Purdue), numerical simulation FEA/CFD, physics-driven design, 20 yrs exp
Guido Quesada, MSME, ASME, FEA, advanced Abaqus instructor, pipe joints, product development, 23 yrs exp
James Cheng, BE(Mech), ME(Mech), fracture mech, press vessel design, plastic injection moulding, 18 yrs exp

ABOUT MATRIX

Matrix provides solutions for engineering design and information management. New Zealand's first and largest team dedicated to engineering computing, supporting the process of innovation for over 35 years. Visit www.matrix.co.nz.

PO Box 56 316, Auckland 1446, Unit 2-5, 72 Dominion Road, Mount Eden, Auckland 1024, New Zealand
T +64 9 623 1223 F +64 9 623 1134 www.matrix.co.nz