

Engineering Report: Simply Supported Beam Analysis

Osdag Internship Project

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1 Introduction

This report presents the analysis of a simply supported beam under various loads. The detailed Shear Force and Bending Moment diagrams are generated programmatically.

1.1 Beam Setup



Figure 1: Simply Supported Beam Configuration

2 Input Data

The loading data extracted from the Excel file is shown below.

2.1 Load Table

Load Type	Magnitude (kN)	Position (m)	Start Position (m)	End Position (m)
UDL	6	NaN	0	15

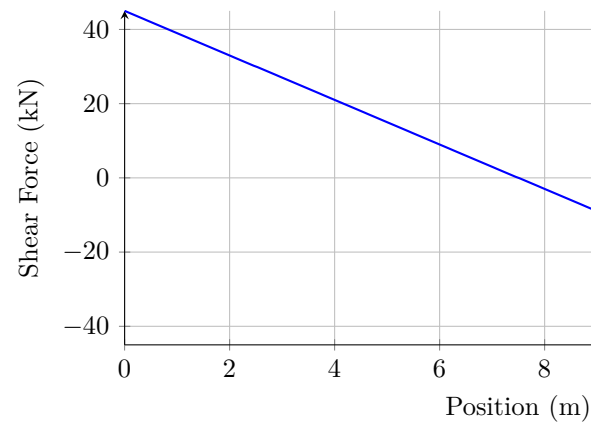
3 Analysis Results

Calculated Reactions:

Ra (Left Support): 45.00 kN

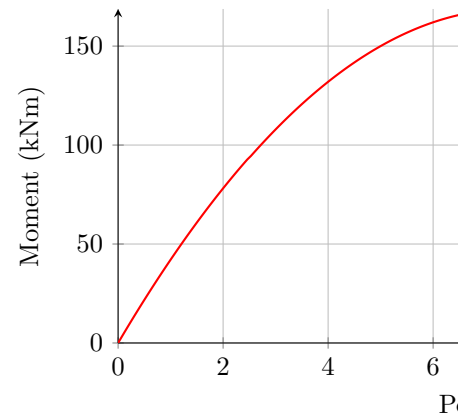
Rb (Right Support): 45.00 kN

3.1 Shear Force Diagram (SFD)



The Shear Force Diagram shows the variation of shear force along the beam.

3.2 Bending Moment Diagram (BMD)



The Bending Moment Diagram shows the variation of bending moment along the beam.