

# Inhalt

## Vorwort

|     |                                                                                                   |    |
|-----|---------------------------------------------------------------------------------------------------|----|
| 1   | Einleitung und Zielstellung .....                                                                 | 1  |
| 2   | Stand der Technik .....                                                                           | 2  |
| 2.1 | Einleitung .....                                                                                  | 2  |
| 2.2 | Stand der Technik bei Türmen und Gründungstrukturen für<br>die Windkraft .....                    | 5  |
| 3   | Bedarfsanalyse bei den Unternehmen .....                                                          | 9  |
| 3.1 | Allgemein .....                                                                                   | 9  |
| 3.2 | Fertiger von Türmen .....                                                                         | 10 |
| 3.3 | Fertiger von Fundamenten .....                                                                    | 11 |
| 3.4 | Bemessung und Konstruktion .....                                                                  | 11 |
| 3.5 | Prüfunternehmen .....                                                                             | 12 |
| 4   | Handlungsbedarf .....                                                                             | 13 |
| 4.1 | Herausforderungen bei der Herstellung von Türmen und<br>Fundamentierungen in Stahlbauweisen ..... | 13 |
| 5   | Fazit .....                                                                                       | 15 |

## Table of Contents

## Foreword

|     |                                                                                                              |    |
|-----|--------------------------------------------------------------------------------------------------------------|----|
| 1   | Introduction and objectives .....                                                                            | 19 |
| 2   | State of the art .....                                                                                       | 20 |
| 2.1 | Introduction .....                                                                                           | 20 |
| 2.2 | State of the art with regard to towers and foundation structures for<br>wind power .....                     | 23 |
| 3   | Needs analysis at the companies .....                                                                        | 27 |
| 3.1 | General .....                                                                                                | 27 |
| 3.2 | Fabricators of towers .....                                                                                  | 28 |
| 3.3 | Fabricators of foundations .....                                                                             | 29 |
| 3.4 | Dimensioning and designing .....                                                                             | 29 |
| 3.5 | Testing companies .....                                                                                      | 30 |
| 4   | Need for action .....                                                                                        | 30 |
| 4.1 | Challenges with regard to the manufacturing of towers and<br>foundations in steel construction methods ..... | 31 |
| 5   | Conclusion .....                                                                                             | 32 |