```
auto_oddeven_wf  THM

⊢  ∀n:ℕ+. OddEven#n ∈ Automata(ℕn;ℕ(2↑n))  by Analyze 0
|
1. n : ℕ+
⊢  OddEven#n ∈ Automata(ℕn;ℕ(2↑n))
| by Unfold ‘automata‘ 0 THEN Unfold ‘auto_oddeven‘ 0
|
|\
| 2. s : ℕ(2↑n)
| 3. a : ℕn
| ⊢  0≤((s+(2↑a)) rem (2↑n))
|   by Inst
|      Thm* ∀a:ℕ, n:ℕ+. 0≤(a rem n) & (a rem n)<n    {rem_bounds_1}
|      [s+(2↑a);(2↑n)]
|      THENA
|      Inst Thm* ∀m:ℕ+, n:ℕ. 0<(m↑n)    {exp_non_zero} [2;a]
|
|\
| 2. s : ℕ(2↑n)
| 3. a : ℕn
| ⊢  ((s+(2↑a)) rem (2↑n))<(2↑n)
|   by Inst
|      Thm* ∀a:ℕ, n:ℕ+. 0≤(a rem n) & (a rem n)<n    {rem_bounds_1}
|      [s+(2↑a);(2↑n)]
|      THENA
|      Inst Thm* ∀m:ℕ+, n:ℕ. 0<(m↑n)    {exp_non_zero} [2;a]
|
.\
. ⊢  0<(2↑n)  by BackThru Thm* ∀m:ℕ+, n:ℕ. 0<(m↑n)    {exp_non_zero}
END
```